

THE TREND
OF THE
AMERICAN
UNIVERSITY

DAVID STARR JORDAN

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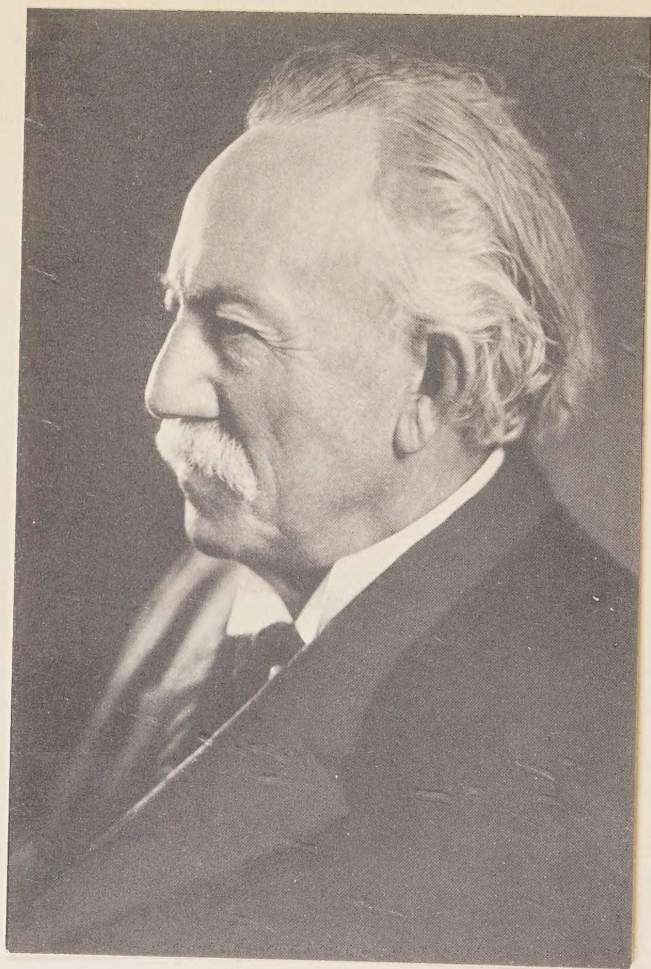
David Starr Jordan

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UNIVERSITY

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By

DAVID STARR JORDAN

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TO THE "OLD GUARD" AT STANFORD
WHO LOYALLY WORKED TOGETHER
TO BUILD UP A NEW UNIVERSITY ON
A CORNERSTONE OF FREEDOM AND
CO-OPERATION

*I have not sought nor do I seek either
to force or to ensnare men's judgments,
but I lead them to the things themselves
and the concordances of things, that they
may see for themselves what they have,
what they can dispute, what they can add
and contribute to the common stock.*

—FRANCIS BACON

FOREWORD

This book comprises three essays on essentially the same subject—change and progress in the curriculum of the American college and university. From among various addresses by the present author on higher education in America, these three were chosen by the Stanford University Press as having a historical connection and as indicating the gradual evolvement of liberal ideas in university training. Covering the same general subject, they necessarily deal to some extent with the same details and therefore contain certain repetitions which the interested reader will perhaps not take amiss.

The first of the three articles, "The Evolution of the College Curriculum," was the inaugural address, in 1887, of the author as first president of the newly established College Association of Indiana, appearing here in the slightly altered form given it when it was published a few years later. The discourse was then deemed rather radical, though most of its proposals have since been generally adopted, the one important exception being the proposed abandonment of the Bachelor's degree. This change also may come about in time; but at present the college world is not ready for it.

The second, "An Apology for the American University," given as the Commencement Address at Stanford University in 1898, deals with certain aspects of progress suggested by the author's experience as president of that institution.

"The American University System, Past and Present," was completed in 1927, ten years after the author's retirement from Stanford with the title of Chancellor Emeritus.

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I. THE EVOLUTION OF THE COLLEGE CURRICULUM

THE EVOLUTION OF THE COLLEGE CURRICULUM (1887)

A RECENT writer on the German system of education, turning from his subject for a moment's contemplation of the American system, is moved to say that the most striking characteristic of the latter is simply its want of system. Instead of being part of a definite whole, well ordered or ill ordered as the case may be, each feature of the American system has been developed with little regard to its relation to the others; and this confusion in development has been made worse by our characteristic misapplication of names, an example of which is seen in our indiscriminate use of the terms "college" and "university." In many a so-called college in America the chief work done is the teaching of the elements of grammar and arithmetic. The "university idea" is often regarded as fully met by the addition to such a college of a Normal School, a professor or two in Law or Theology, and a self-supporting "College of Music."

Yet in spite of all eccentricities in name or form, we can recognize the existence of a certain definite type of school which we may call the American college. There are many variations in

this type of school—variations due to geographical position, to the excess or deficiency in denominational zeal, or to the exigencies of the struggle for existence. For the fiercest conflicts of the average American college have not been with the black giant Ignorance, but with the traditional wolf at the door. In other words, this new country has not been liberal in its support of higher education; and moreover the funds available for this purpose have been used to found a multitude of weak schools rather than to make a few schools strong. There have been several reasons why this is so, and there are some reasons why it has been well that it is so; but these questions I do not care to discuss now. The law of the survival of the fittest can be depended on to rectify sooner or later all mistakes of this kind. Suffice it to say that we recognize the existence of the American college, and that this college possesses a more or less definite college curriculum. Of the changes in this curriculum I wish now to speak.

I shall not try to follow out in detail its history prior to the time when its germs were brought to us from England in the landing of the Pilgrims. We can go back in England to the time when the philosophy of Aristotle constituted the college course. Then the entire curriculum was taught by a single teacher, the man of universal knowledge.

This teacher for the most part gave his instruction by dictation. The students noted down the contents of old books, which the master himself had copied before; the place of the teacher was simply that of a medium of communication between the ancient manuscripts and their later duplicates.

With the revival of learning came the advent of the study of Latin as a language having a literature, and later the study of Greek, both Latin and Greek, as literary studies, being considered extremely dangerous as well as heretical at the time of their introduction into the curriculum. Both were then resisted by the full force of the conservative party of the day. After the revival of learning came about with time the English college curriculum, with its *Tripes*, or three pedestals of Greek, Latin, and Mathematics. Of this the American curriculum has been a lineal descendant.

The American college curriculum at the time when most of us became acquainted with it was a very definite thing, time-honored, and commanding a certain respect from its correspondence with the theory on which it is based. Its fundamental idea was discipline of the mind. Its mode of effecting this was, in large part, by shutting the student's eyes to the distracting and inconsequential present, and fixing his gaze on that which was great and good and hard to under-

stand in the past. The main work of the course consisted of drill in grammar and mathematics, and the results of this training were bound together by a final exposition at the hands of the President of such of the speculations of philosophers as seemed to him safe and substantial. This work lasted—for reasons so old as to be long since forgotten—just four years, and it was preceded by a certain very definite amount of drill, of much the same kind, which was regarded as a necessary preliminary to the other work.

Whatever may be our opinion as to the desirability of such a course for ourselves or for our sons or daughters, it is impossible not to regard the old-time classical course with a feeling of respect. It was based on a theory of education, and its promoters were loyal to this theory. If only the boys for whom its pigeon-holes were arranged could have been of uniform size and quality, the system would have been perfect. That it was not quite perfect was clearly the fault of human nature, which furnished a very variable article of boy for the educators to work upon, and caused them to reach by uniform processes widely different results. What these variations were is well known to us and needs no explanation. We know there are some boys whose natural food is the Greek root. There are others whose

dreams expand in conic sections, and whose longings for the finite or the infinite always follow certain paraboloid or ellipsoid curves. There are some to whom the turgid sentences of Cicero are the poetry of utterance; and there are others who with none of these tastes grow and blossom in the sunlight of comradeship, undisturbed by the harassing influences of books and bookish men. To all these kinds of students this old-time classical course brought satisfaction, and the days they spent in Princeton or Harvard or Amherst were the brightest of their lives. Such have rarely failed to try to provide for their children the same training which they found so satisfying themselves.

But there were other students, not less fond of study, who were restless under these conditions. There were some to whom the structure of the oriole's nest was more marvellous as well as more poetical than the structure of an ode of Horace. There were others who found in modern history or literature or philosophy an inspiration which they did not draw from that which is old. By the side of this inspiration the grammatical drill of the schools seemed a lifeless thing. And so it has happened that many whom we now regard as great in our literature or our science were held in low esteem in the colleges in which they graduated, if indeed they ever graduated at all. For the

scale of marks connected with the college curriculum took little account of the soul of man, but only of the docility and regularity (virtues of themselves of no mean order) with which the college discipline was taken. And as these qualities are not alone the qualities which win success, either real or spurious, in after life, it came to be believed that college honors meant future failure, that the college valedictorian was the man who was never to be heard of again; and in this popular error, easily disproved by statistics, there was just enough of truth to keep it from being forgotten.

No doubt the ancient classical course was a powerful agency for culture to many—to most students perhaps who came within its influence. But it was not so to all. Culture is an elusive thing, and the machinery which will secure it for you may have no such effect on me. So that, among the students of the old régime, some never found culture, and some found it only in a surreptitious study of the world outside. Complaints were not wanting that, in this curriculum of Latin, Greek, Mathematics, and a varnish of Philosophy, not all the studies pursued were useful studies. Much of this complaint was unjust, for a college is not a school of technology. Higher education is not learning a trade, nor is its purpose to enable its

possessor to get a living. Lowell's definition of a university as "a place where nothing useful is taught" is, I think, one by which we as college teachers must loyally stand. But some of this complaint has been just. No part of a man's education is of much value to him unless it is in some way concerned with his future growth. Thousands of students never look at a Latin book after leaving college. This matters nothing if the skill they have acquired in reading Latin gives them greater mastery over their future study or a deeper insight into the problems of life. It matters much if the knowledge has in no wise given either insight or mastery. For in such case a knowledge of Horace and Homer would be as useless as the learning by heart of the laws of the Medes and the Persians or an enumeration in order of all the kings of Shanghai or Yvetôt. The tree of knowledge is known by its fruits. "Culture," says the younger Holmes, "in the form of fruitless knowledge, I utterly abhor!"

Now, to those who found culture, the college course had served its end; to others, it had not. It was good or bad, not in itself, but in its results. It is idle for us to say, "It is sufficient for all," "It is sufficient for none." The discussion of these rival theses has not helped much in the solution of the educational problem. Emerson says:

“The Ancient Languages, with great beauty of structure, contain wonderful remains of genius, which draw, and always will draw, certain like-minded men, Greek men and Roman men, in all countries to their study; but by a wonderful drowsiness of usage they had exacted the study of all men. Once (say two centuries ago) Latin and Greek had a strict relation to all the science and culture there was in Europe, and mathematics had a momentary importance at some era of physical science. These things became stereotyped as education, as the manner of men is. But the good spirit never cared for the colleges, and though all men and boys were now drilled in Latin, Greek, and Mathematics, it had quite left these shells high and dry on the beach, and was now creating and feeding other matters at other ends of the world.”

Thus, as the years went on, other sources of culture became more and more emphatic in their claims. The workers in the various fields of science, each year becoming more numerous and more active, opened out great vistas of the works of God, and he who had seen nothing of these might well have his claims to culture doubted. Philology, History, Philosophy, other than that stamped with the approval of the safe old masters, each put in its claims, as also the vast wealth

of the literatures of modern Europe. A citizen of the Republic must know something of the laws which govern national prosperity, and a teacher of the people should know something of the theory according to which people are taught. When these subjects are left out of the college curriculum, the clamor for their admittance becomes unbearably loud. If all are admitted, the same curriculum becomes like an American horse-car, with standing room only and no space to turn around.

What shall the colleges do? Shut out these subjects they cannot; for to exclude all modern studies and modern ideas, to step out of the current of modern life, is practically to exclude all students. Rightly or wrongly, the students want these things, and sooner or later the American college must give what the students want. The supply must meet the demand or there will be no demand. No doubt we as professors know better what is good for the student than the student does himself; but unless we can convince him of that we must let him have, to a great extent, his own way as to what his studies shall be. We can see that he does his work well, and we can help him in many ways; but the direction of his efforts must in the end rest with him.

The colleges of America stand in a different

position in this regard from similar schools in England or Germany. These last are parts of a definite system. Their financial support is such that there is no need of paying any special attention to popular demands, if these demands are deemed theoretically undesirable. Moreover, the college degree in England and its equivalent in Germany form a passport of admission to social, educational, or political privileges inaccessible to the man without this degree. Hence entrance to the college or Gymnasium or the university is, among the educated classes in these countries, a matter of course to a much greater extent than can be the case in America. The Bachelor's degree in America, or even the Doctor's degree, carries no privileges of any sort worth the name. Very few of our students would work for a degree if it were believed that the title were all they got. Thus it comes about that in America the average student goes to college or is sent to college for the help to be got from study rather than for the sake of graduation. And he must be convinced, or his parents must be convinced, that this good is a real good, or he will not seek it. Thus the difference in the conditions under which our colleges work has tended to modify and modernize the curriculum more rapidly than has been the case in the corresponding schools in Europe.

Many devices have been adopted for dealing with the modern studies. Some have admitted them as extras, or, in the expressive language of a New York college president, as "side-fixings," reserving the old-time Tripas as the solid part of the scholastic meal. But no matter how little a hold these modern studies had, their presence has weakened the force of the old-time discipline. It is a law of physics that two bodies cannot occupy the same space, even though one of them be badly squeezed. And these subjects will submit to squeezing no better than the others. So part of the old course must be crowded out and part of the new must be admitted on terms of more or less perfect equality with the former; or else some degree of selection must be permitted, that students may choose between new and new or between new and old.

Another conceivable arrangement would be to omit none of the old work, but to lengthen the course, with each study added to the curriculum, until each could receive a proper share of the student's attention. But this cannot well be done. Four years is the fixed length of the American college course; and this being an arbitrary thing, with no sort of reason for it, there can be no successful argument against it. Besides, we live in hurrying times; and to our students time is

money, and the only money some of the best of them have. To the majority of those reached by our colleges, even the traditional four years seems a long time to spend in school after reaching manhood.

In various ways it was sought to harmonize the new education with the old. But the average American college has finally adjusted itself to a second phase in the history of the curriculum, which for convenience I may call the patchwork stage. In this arrangement most of the higher mathematics has been crowded out, the Greek has been shortened and the Latin also; while other subjects, in greater or less amounts, have been more or less grudgingly admitted. The amount and kind of these subjects is rarely determined by any prearranged plan or in accordance with any sort of definite theory of education. As a matter of fact, each college has a certain number of professors, this determined by the Board of Trustees, in accordance with real or imaginary needs of the college, or with the real or imaginary claims of candidates for recognition. Then in the Faculty meetings each one of these professors claims what he wants and receives what he can get, in accordance with the law of the survival of the fittest and the rule of the majority. Thus the curriculum in each college becomes the resultant of many

forces, in a condition of unstable equilibrium. It is altered, not in accordance with the educational needs of the students, but when one professor gives place in the Faculty to another more or less energetic or clamorous than he.

Occasionally in these patchwork courses of study, the trace of some master hand is visible—some method in its madness which shows that somebody has tried to work out an idea. But this is rarely so, I think; and in the arrangement of most courses of study, nothing higher has been thought of than expediency and the exigencies of compromise. From the struggle between the representatives of rival subjects in an overloaded course, has come about, by way of compromise, the establishment of different courses of study, in each of which it is assumed that some scholastic faction will have the ascendancy. In some colleges these various courses have been put on an exact equality, but in most cases a more or less positive pressure has been brought to bear in favor of the classical course, and especially away from the sciences. This is well, I think; for in most of our colleges the instruction in science is still absurdly inadequate, and wholly valueless for the main end of scientific instruction—the training of the judgment through its exercise on first-hand knowledge. Wherever science is yet in

the meshes of bookishness, it is best that students should be turned away from it. Wherever its limbs are free, it will hold its own, whatever the pressure from those who do not value it as a factor in education. In other words, a competent teacher of science need never complain of obstacles in his way, for the odds are all on his side. The same thing is true, I believe, of a competent teacher in any other department. A growing man incites growth; but even mold will not grow on a fossil. Some ten years ago I heard a college president boast that although his college had two other courses, yet three-fourths of his students had been kept in the classical course. My question was, What sort of teaching have you in science? There was nothing worth speaking of; only husks which the swine would not eat, and the most hungry student could not.

As I have said, I do not think that the average college curriculum, as we have known it in this second stage, is the result of any sort of theory of education, of any appreciation of the relative value of studies, or of any thought as to the best order in which such subjects could be arranged. I have myself taken part in the preparation of too many such courses to have much respect for them. They are simply the results of an attempt to put a maximum of topics into a minimum of

terms—to squeeze ten years of subjects into four years of time. The predominance of one group of subjects in a course reflects the predominance of some professor in that line of work. The idea of discipline, more or less prominent in the lower years, is usually forgotten entirely in the Junior and Senior years. The idea of the German schools that the source of all power is concentration—or, as Emerson expresses it, “The one prudence of life is concentration, the one evil dissipation”—was wholly abandoned. The theory arose that a college is not a place for thorough work of any sort. Its purpose is to give a broad and well-rounded culture, to train men to “stand four-square to every wind that blows”—such a culture as comes from a slight knowledge of many things, accompanied by thoroughness in nothing. Indeed, the desire of the student to know some one thing well was characterized as “undue specialization,” and every effort was made to induce the student to turn with equal eagerness from study to study—to Physics, Logic, Greek, or History; equally interested, equally superficial, in each. The study of the textbook was exalted, and a subject was said to be completed when its alphabet and a few preliminary definitions were more or less perfectly memorized. Thus it came about that the average student regarded all studies with

equal indifference. If a momentary spark of interest was evoked, it must fade out in a few days, as the subject in question gave place to some other. The procession moved in haste, and the student could not loiter if he was to keep his place in the line.

It was said in justification of this course of study that the function of the college is to offer a taste of all sorts of knowledge. The student could try all, and select that which he liked best as the future work of his life. Thoroughness is for men, not boys, and it is a part of life-work rather than of school discipline. But every influence of the college was away from this end. The value of persistent study, as the Germans know it, was never made known to the student. His professors were not specialists. They knew nothing from first hand, and they undervalued in all ways the power which comes from knowing what one knows. So they taught only definitions and classifications and names and dates and scrap-work generally. There was little temptation to study; for the business of the professor was repetition, not investigation. It was in reference to such work as this that Agassiz said of Harvard College, some twenty years ago, that it was no university—"only a respectable high school, where they taught the *dregs* of learning." A candidate for a chair in

an Illinois college demanded of the Board of Trustees that he must be allowed some time for study. He was not elected; for the Board said that they wanted no man who had to study his lessons. They wanted a professor who knew already all that he had to teach. Men of second-hand scholarship are, of necessity, men of low ideals, however carefully this fact may be disguised; a man of high ideals of scholarship must be an investigator. He must know and think for himself; and only such as do this can be really great as teachers.

One vice of this system is its constant implication that when after a few weeks a study is dropped it is thereby completed—as though any subject could be completed in a college course! For the first term or the first year spent in the study of any subject whatever, cannot give that subject. It gives only the elements of it, the dregs of it, the juiceless skeleton, on which future work must add the flesh and blood. Culture does not consist in the knowledge of any particular subject or set of subjects, nor is it the result of any order or method by which such studies are taken. Its essential feature is in the attitude which its possessor holds toward the world and toward the best that has been or can be thought or done in it. Its central quality is growth. The student gets nutriment from what he digests. “A cultivated

woman," says a wise teacher of women, "can afford to be ignorant of a great many things, but she must never stop growing." Just so with the cultivated man. And to the young man or young woman who would grow, there is no agency so effective as the influence of a great teacher. "Have a university in shanties, nay, in tents," says Cardinal Newman, "but have great teachers in it." "Under and around and above all mere acquirements," says the writer whom I have just quoted, "is this subtle infection of character, making the essence of the higher education as different from mere erudition as the fresh smell of the tender grape is from sheepskin." The school of all schools in America which has had the greatest influence on American scientific teaching was held in an old barn on an uninhabited island some eighteen miles from the shore. It lasted barely three months, and in effect it had but one teacher. The school at Penikese existed in the personal presence of Agassiz; and when he died, it vanished.

The final theory of the patchwork stage of the curriculum has been, as I have said, that of breadth of culture. The student should possess the elements of everything, that no part of the world should be a sealed book, that no part of his mind should be developed at the expense of any

other. But the result was, in a general way, oftener confusion than culture. The bedrock of the mind was never reached. So far as mental training was concerned, almost every result of this curriculum was distinctly inferior to that secured by the old classical course. In broadening and modernizing the curriculum, its sharpness as an implement was lost. The only real gain in the change, according to Professor Bain, has been "the relaxation of the grip of Classicism." Another was perhaps that many who got nothing from the old course could with the right kind of teachers get something from this. But a criticism I once heard at one of our college exhibitions was still pertinent as to most of the work done by either professor or student under this régime: "What the boys want is to plough a little deeper. There is nothing like subsoiling!"

From the second to the third stage in its history the curriculum of the American college is now passing. This is marked by the advent of the elective system. It is impossible to study everything or even many things in four years. Thoroughness of any sort is incompatible with the so-called breadth of culture characteristic of the patchwork era. True breadth of culture comes from breadth of life, and four years in college cannot give it. The elective system, when carried

out in its entirety, involves the following elements: (1) A substantial and thorough course preparatory to the college course—this course including much that is now taught in the Freshman and Sophomore years in most of our Western colleges. (2) The placing of all subjects taught in the college course on an equality so far as the degree is concerned.

The theory on which this system is based may be briefly stated as this: No two students require exactly the same line of work in order that their time in college may be spent to the best advantage. The college student is the best judge of his own needs, or at any rate he can arrange his work for himself better than it can be done beforehand by any committee or by any consensus of educational philosophers. The student may make mistakes in this, as he may elsewhere in much more important things in life; but here, as elsewhere, he must bear the responsibility of these mistakes. The development of this sense of responsibility is one of the most effective agencies the college has to promote the moral culture of the student. It is better for the student himself that he should sometimes make mistakes than that he should throughout his work be arbitrarily directed by others. Freedom is an essential to scholarship as to manhood. In Emerson's words, "Free should

the scholar be, free and brave." Not long since I met a young German scholar, a graduate of a Prussian Gymnasium, who has enrolled himself as a student of English in an American college. To him the free air of the American school was its one good thing. It develops a self-reliant manhood in the youth at an age at which the student of the Gymnasium is yet in leading strings. In furnishing the best of mental training in certain fixed and narrow lines, the German student is deprived of that strength which comes from self-help and individual responsibility. It is no mere accident that the need of severe college discipline to guard against the various forms of traditional college mischief has steadily declined with the advent of freedom of choice in study.

The elective system, too, enables the student to bring himself into contact with the best teachers—a matter vastly more important than that he should select the best studies. And this system, therefore, involves a not unhealthy competition among the instructors themselves. Incompetent, superficial, or fossilized men will be crowded out or frozen out, and the law of the survival of the fittest will rule in the college faculties as elsewhere in Nature.

The elective system has been adopted in greater or less degree by most of our leading col-

leges; while there are now very few schools, large or small, which do not make some provision for elective studies. That some degree of freedom of choice in higher education is desirable, no one now questions. The main differences of opinion relate to the proportion which these elective studies ought to bear to those which are absolutely required, and to the age or degree of advancement at which election is safe; for no one advocates freedom of choice from infancy. There is no such thing as a perfect curriculum, and all college courses must represent in some degree a compromise among varying influences, or else an adaptation to the needs of a certain class of students to the exclusion of others. All systems are liable to abuse; and as there have been many students who made a farce of the classical course, or who made it a mere excuse for four years spent in boating or billiards or in social pleasures, so in the same way can a farce be made of the freedom allowed under the elective system.

Some of the chief deficiencies of the elective system may be summed up under the following heads:

1. There are some students who from pure laziness select only the easiest studies, and go through college with the very least work which is possible. But this is no new thing, and it is not

for such students that the colleges exist. The college should not obstruct the work of its earnest men to keep its idlers and sneaks from wasting their useless time. As Dr. Angell has said: "No plan will make the college career of lazy men brilliant. . . . The work of the college should be organized to meet the needs of the earnest and aspiring students rather than the infirmities and defects of the indolent." That most students as a matter of fact do select the easiest studies is not true, as statistics certainly show. It is, in fact, simple nonsense to call any study easy, if pursued in a serious manner for a serious purpose. If any subject draws to itself the idlers solely because it is easy, the fault lies with the teacher. The success of the elective system, as of any system, demands the removal of inefficient teachers. The elective system can never wholly succeed unless each teacher has the power and the will to enforce good work, to remove from his classes all idle or inefficient students.

2. It is again objected that students having freedom of choice are likely to select erratic courses in accordance with temporary whims, rather than with any theory of educational development. This again is true; but it is likewise true that the course apparently the most erratic may be the one which brings the student in contact with

the strongest men. If a Harvard student of a few years ago could have made his college course exclusively of Botany, Embryology, Greek, Anatomy, and Early English, it would seem a singular combination. It would sound differently if it were said that his teachers in college were chiefly Asa Gray, Goodwin, Holmes, Lowell, and Agassiz. It is also true, I think, that the average course as chosen by the students themselves is as capable of serious defence as the average established course, evolved from the pulling and hauling and patching and fitting of the average college Faculty.

3. Another criticism is that the elective system offers special temptation to undue or premature specialization. This is true; and premature specialization, like other forms of precocious virtue, is much to be deprecated. But experience does not lead me to think that the danger of "undue specialization" is at all a serious one. The current, in college and out, is all setting the other way. The fact that any man dares to specialize at all shows that he has a certain independence of character, for the odds are against it. Specialization implies thoroughness, and I believe that thorough knowledge of something is the backbone of culture. Special knowledge of any sort gives to each man the base line by which other attainments may be measured; and this unit of measurement

in scholarship can be acquired in no other way. There can be, I think, no scholarship worthy of the name, without some form of special knowledge or special training as its central axis. The self-respect of the scholar comes from thorough work. The man who feels sure that he can know or can do something is assured at once from the danger of turgid conceit as from that of limp humility. He can hold up his head among men with a certainty as to his proper place among them.

I have often heard college graduates complain, "Oh, if I had only studied something in particular!" "Oh, if I had only learned how to study!" "Oh, if the time I have wasted in Latin had been spent in something else!" "Oh, if the time I have wasted in something else had been spent in Latin!" There are few college men of the present generation who would not be better scholars to-day if half their curriculum had been omitted (not much matter what half) and the time had been spent on the remaining subjects. But you may say, "Would you let a man graduate ignorant of Chemistry, of Latin, of Logic, of Botany?" Well, yes, if superficiality in everything is the alternative. It is well for a scholar to know something of each of these and of each of the subjects in the most extended curriculum. But he pur-

chases this knowledge too dearly if he buys it at the expense of thoroughness in some line of study in which a real interest has been awakened. "A mistake is made," says a recent writer, "in treating studies like boarders. They are taken in and housed at so much a term, and at its end hostess and guest part with mutual good-will." Some closer relation than this is essential to scholarship.

Then, again, with certain men in college the alternative is either a close specialization or no college life at all. Sometimes a man may wish in college to devote his entire time to a single subject, as Physics or History, making himself an authority on that subject, but without any effort for broad culture at all. This is not often a wise course; but wise or not, no one will deny that a college career spent in this way is better than none at all, and in after years such men are rarely a source of shame to their Alma Mater. There is a certain well-known naturalist whom I could name, who was some ten years ago excluded from Indiana University, not because he was idle or vicious or weak, but because he wanted to spend most of his time in the study of Natural History. The college had then no place for such a man as that, though the same college is proud of him now. Who is to say that it was better for him to leave college than that he should be al-

lowed to follow his own bent? No knowledge comes amiss to an investigator, but no investigator can afford to sacrifice his specialty for the sake of breadth of culture. Thoroughness is the main point, after all, and should take precedence over versatility. I do not mean to be understood as advocating narrowness of sympathy or narrowness of culture of any sort. The broadest education is none too broad for him who aspires to lead in any part of the world of thought. But the forces of the mind, to continue the figure, should not be scattered in guerilla-bands, but marshalled toward leadership.

4. Still another criticism of the elective system is just the reverse of this. The elective system permits undue scattering. It allows a student to flit from one subject to another, thus acquiring versatility without real training. This seems to me a more serious fault than any of the others. It can be remedied in part by a system of major and minor studies, or a division of the work into specialties to be pursued for a considerable length of time, and electives which may be dropped after a simple mastery of their elements. Some such arrangement as this seems to me a desirable check upon the elective plan, as it tends to insure persistence in something, while retaining most of the flexibility of the latter system.

There is still much to be said in favor of the college in which discipline pure and simple is made the chief aim of all the work. In such a school those subjects—Languages, Sciences, and Philosophy—which serve the ends of training best should be taught, and such subjects only. Whether anything more suitable for this purpose than the Ancient Classics and Mathematics has yet been found, I shall not try to say; but the aims of such a course should be the same in kind as that of the classical curriculum. It may perhaps be possible to teach better things and in a better way than was done in the classical schools; but all attempts at combining in a prescribed curriculum mental discipline and a wide range of subjects must result in failure, so far as training the mind is concerned. You cannot teach everything to every student. Either the college or the student must choose.

Some of the weakest features of our college system center, it seems to me, about the conventional term of four years, and the conventional Bachelor's degree. Students are encouraged to work for the degree rather than for culture; all work of the student is estimated by the bulk rather than by the quality. In an ideal condition of things the student's work ought not to be estimated at all. Marks and terms are clumsy devices,

more suitable for measuring cord-wood than culture. The degree is the official seal of completion set on something which in the nature of things can never be completed. For the college is not a machine for filling the student on the sausage-stuffer plan. It is, at best, a place for self-culture. All culture is self-culture, or it is no culture at all. Libraries, apparatus, museums, teachers even, are useless to the student, unless the student use them. Teachers give inspiration and criticism; fellow-students do the same; but the road to wisdom is a solitary road to be traversed in Indian file.

We may lay on the Bachelor's degree at once too much stress or too little. Too much; for the degree is treated as if it were an end in itself. Too little; for every college in our land gives this degree to men whose sole claim to higher education consists in a four years' residence in a college town, a four years' "exposure to scholastic influences." They make their count of marks on the college books; and if by hook or crook they can keep "regular," the march of time will carry them through. Then again the competition for numbers among our would-be "populous schools" often leads to discrepancies between the actual requirements and those laid down in the published catalogues. Thus low standards are adopted for mere numbers' sake. And besides the repu-

table institutions, all sorts of mushroom establishments in private hands have in the Western States been authorized by law to grant the Bachelor's degree, with practically no scholastic requirements at all.

When the colleges in the patchwork era attempted to teach in four years a little of everything, it was found that by the same process a little of everything could likewise be given in two years, or even in one year, by carrying the process of condensation a little farther. I received a letter not long ago from the president of an alleged college in Kansas—a school which gives the Bachelor's degree on a course a year or two long, begun at any time, and with no special preparation. He said that he had exactly one year of daily recitations to devote to all the sciences, each completed in turn. He was especially anxious to make no mistake in the logical order of arrangement of these sciences—whether it should be Chemistry, Physics, Geology, Physiology, Zoölogy, and Botany, or whether the order would be better if reversed. Of course, the only answer I could make was that the order was of little importance, and that if a year was all the time he had for all of them, it would be better to omit any five or at least any four, and to spend his time on the rest. But my advice was not followed, and I have no doubt

that he found room at last to work all of them in, and a term of Astronomy and one of Political Economy besides.

I quote, from the catalogue of an alleged "college" in Indiana, a statement in regard to its "Scientific Course" of one year's duration, which leads to a degree called "Bachelor of Science": "The graduates [of this course] are polished speakers as well as accurate mathematicians, thorough scientists, and accomplished Latin scholars. Graduates from this department fill good positions, and are everywhere known as leaders, because of their energy, perseverance, enthusiasm, and never-ceasing activity," and so on. The so-called "insurmountable barrier" to a degree "formed by the long courses of the colleges and State Normal Schools," is at once blown away, and all obstacles which debar indolence and ignorance from the privileges of scholarship once for all removed.

I have a friend in this town [Indianapolis], a most estimable gentleman in the real estate and rental business, who some forty years ago received from the legislature of the State of Indiana a charter which constituted him a "University," entitled to hold \$200,000 in property free from all taxes, "to confer all academic degrees, and to enjoy all the rights and privileges of the most fa-

vored institutions." This gentleman has been merciful to his fellow-citizens. He has gone about his business and has conferred no degrees, not even on himself. But he has the legal right to do it, and this incident shows with what laxness the laws of our own and other states view the granting of collegiate degrees. Such is the degradation of the Bachelor's degree, which has already brought the name of American graduate into contempt.

Still, at the best, the Bachelor's degree is an empty name. It is not in America, as in Europe, a key to any sort of personal advancement. And it is better that it should be so. It is better for each man to stand on his own merits as shown by his own work, not as attested by any college faculty. "The student may flourish his college diploma," says Dr. J. P. Lesley, "but the world cares little for that baby badge." In certain educational circles, perhaps, a college degree is a help, or rather it may represent a certain minimum of culture which is expected of all its members. We suppose that a college professor must hold a college degree. But this is not always the case. I can count on my fingers, taking every one, a list of some of the ablest of Indiana's college teachers today, who have never been graduated from any college. Most of these hold honorary degrees, it is true; but such degrees are empty

tributes of the college to success of one sort or another, won without the college's help.

It is true, no doubt, that the hope of a degree coaxes some men to stay in college longer than they otherwise would. This seems a good thing, but is it? Higher education is not working for a degree. It may be incompatible with it. It is putting a cheap price on culture to induce the student to take it, not because he wants it, but because he wants something else. If a student's work is purely perfunctory, the sooner he leaves it for something real the better. If the degree is merely a bait to lure him on, it is unworthy alike of the college and of the student.

Shall we then abandon the Bachelor's degree, and give to each student merely the certificates of the professors under whom he has studied? Some day, perhaps, but certainly not yet. It was a French writer, Joubert, who said, "All *truth* it is not well to tell; but all *truths* it will be well to tell when we can all tell them together." There is the wisdom of the serpent in this saying. Degrees are childish things, and it would be well to lay them aside; but this we cannot do till we can all do it together. Some ten years ago, Chancellor Gregory of the State University of Illinois held the opinion that the college degrees were undesirable adjuncts of college training. It was decided that by

the University of Illinois no degrees should be granted. But this decision worked adversely to the interests of the college. Many students came there to study who went elsewhere to complete their work. The degree might be useless, but the students wanted it, and went to other colleges where degrees were still given. The times were not ready for this change, and the giving of degrees has been resumed—wisely, I think—by the institution in question.

The same end is being reached in another way by the University of Virginia and some others which are following its lead. In these schools the Bachelor's degree receives little or no attention, being practically merged in the higher requirements for the degree of Master of Arts. By merging both these in the still higher degree of Doctor of Philosophy, we have a condition similar to that in the German universities, where only the Doctor's degree is now given. Toward this condition our universities are tending; and through the change of the college into the university the Bachelor's degree may in time disappear. But this reform—if reform it be—can be the work of no one man or one school. It must come as a natural result of the development of the college.

So much for the phases, past and present, of the college curriculum in America. What of the

future? Will there be a fourth, a fifth, a sixth stage in its development; or is the system now full-grown, and the elective plan, as we know it, its full fruition?

We can be sure that the world is still moving. Nothing is stable, nothing is perpetual, nothing is sufficient. With the new needs and the new men of the future will come new departments, new methods, and new ideas. The curriculum in its original sense of a little race-course, with thirty-six hurdles to be leaped in thirty-six months, with a crown of laurel berries at the end, will very soon be no more. Special courses of study in as many special departments are already taking its place. The traditional four years of college training will disappear; and with it the sharp lines which have so long set apart the Freshmen, Sophomores, Juniors, and Seniors. Later on, but not far in the next century, the Bachelor's degree will cease to be regarded; and its kindred, the degree of the Master and the Doctor, may perhaps not survive it long. All these things are forms, and forms only, not substance; and the substance of our higher education is fast outgrowing them. College marks, college honors, college courses, college degrees—all these things belong, with the college cap and gown and the wreath of laurel berries, to the babyhood of culture. They are part of our inheri-

tance from the past—from the time when scholarship was not manhood, when the life of the student had no relation to the life of the world.

The American college of the future will be a place for self-culture. In the words of Emerson: "Colleges can only highly serve us when they aim not to drill, but to create; when they gather from far every ray of various genius to their hospitable halls, and, by the concentrated fires, set the hearts of their youth on flame."

The chief need of a college organization is to bring great teachers together, that their combined influence may effect results which cannot be reached in isolation. In other words, the use of a college is to produce a college atmosphere, such an atmosphere as formed itself around Arnold at Rugby, around Döllinger at Munich, around Werner at Freiberg, around Agassiz at Cambridge, around Mark Hopkins at Williamstown—around all great teachers everywhere. The various so-called colleges and universities in America will gradually differentiate into universities and preparatory schools, and the ultimate line of division will be one of money as well as one of management. To do university work requires better-trained professors, and many more of them, than to teach the elements of Latin, Greek, and Mathematics. This means more salaries and larger sal-

aries than are now paid. Schools ill endowed or not endowed at all cannot attempt this. Those who can do it will do it, and the success of Johns Hopkins University shows how this is to be done. The ideas of *Lehrfreiheit* and *Lernfreiheit*—freedom of teaching and freedom of study—on which the German university is based, will become a central feature of the American college system.

The college as a separate factor in our educational system may in time disappear by its merger into the preparatory school on the one hand and into the university on the other. We should then reach a condition of things not unlike that seen in Germany, where nothing intervenes between the public high school or Gymnasium, in which all work is prescribed, and the university itself, in which all work is free. The position of the preparatory school in this connection is by no means one to be despised. A strong preparatory school is far more valuable to the community than a weak college. The work of the secondary schools is the foundation of everything higher. It should be broadened and deepened so as to include all subjects which experience shows to belong to the necessary groundwork of higher education. I need not go over a list of these subjects. The future will make its own list, and the efforts of the colleges will not change it.

But here, it seems to me, is one of the chief difficulties in the way of our colleges, East and West. No school in Indiana seems content to be a preparatory school. Each one aims to give a general education; to be a university in a small way, a "university for the poor"—a poor university. In the words of Lowell: "The public schools teach too little or too much: too little, if education is to go no further; too many things, if what is taught is to be taught thoroughly. And the more they seem to teach, the less likely is education to go further; for it is one of the weaknesses of democracy to be satisfied with the second best if it appear to answer the purpose tolerably well, and to be cheaper, as it never is in the long run." In other words, the high schools, too, are in the patchwork era, and popular feeling tends to keep them there, to satisfy by a show of education the vast majority of their students who are likely to go no farther. The growth in educational systems is from above downwards, and the right kind of preparatory schools will arise only in response to the demands of real universities. In historical sequence Oxford must precede Rugby, and the German university must come before the Gymnasium. The American high school will not reach, I think, the standard of the German Gymnasium, which gives training not inferior in amount or

kind to that of our best classical colleges; for in the American system the university methods of work will begin lower down than in Germany. This is associated with our qualities as a people as compared with the Germans. The American youth of twenty-one is more independent, more self-reliant, and, so far as his relation to the world is concerned, more mature than the average German student is at twenty-five. America is, of all lands, the land of protestantism; and in education, as in other things, every American is a law unto himself. This fact has its bad side as well as its good side, but is a fact nevertheless; and as educators of Americans we must take it into account.

The old forms in education are passing away; the old barriers are being taken down; the old restraints are being removed or relegated to the days of boyhood and girlhood. All this we can see, for it takes place before our eyes; it is taking place under our hands, and this whether we wish it or not. The college boy is becoming a man, and the college woman now stands beside him. Not all are ready for freedom, perhaps, who have freedom thrust upon them. There are not a few students to whom an enforced discipline is the only road to scholarship. But with all imaginable drawbacks our college work in America yields

every year better results than it has ever yielded before. We may be sure that in the future, even more than in the past, the American college, the American university, will stand in the front rank of civilizing influences.

II. AN APOLOGY FOR THE AMERICAN UNIVERSITY

AN APOLOGY FOR THE AMERICAN UNIVERSITY

(1898)

Now and then in these days some successful business man raises his eyes from his counter to question the American university's right to exist. "Does higher education pay?" he asks, and from his own experience of tireless energy, and from his own contact with thin-legged, white-faced collegians seeking a job, he gives to this question a qualified negative. He further claims, should he care to pursue the subject at greater length, that opportunities for higher education are too widely diffused, and that the American masses are victims of over-education.

If all this is true, it is time to call a halt and take account of stock. We have invested too much in universities—love and devotion, as well as bonds and gold—for us to be indifferent to their usefulness. In any case, it may be worth our while to spend half an hour in considering this question, even though to you and me, who are not in success as a life business, such statements of men of business may seem belated and absurd.

It is certain, in the first place, that to speak of "over-education" is a misuse of terms. If education is rational and effective, there cannot be too

much of it. It is not men trained and efficient who enter into destructive competition. It is the ignorant and ineffective who make the struggle for existence so dire a battle. Whatever leaves men weak and ineffective cannot justly be called education. There is nothing more useful than wisdom, nothing more effective than training, nothing more practical than sunshine. Surely no one can claim that the American people are too wise, too skilful, or too enlightened for their own good. Yet to give wisdom, skill, and enlightenment is the main function of higher education. It cannot give brains, courage, and virtue where these qualities were wanting before. It cannot make a man, but it furnishes the best known means to help a man to make himself. The gain through self-building often outweighs in value the original material. It may be more important even than the finished product, as effort is a greater source of strength and happiness to man than final achievement.

What these critics usually mean to attack is misfit education—the training or straining of the memory rather than the acquisition of power to think and act. They mean that the colleges give schooling rather than training. They “teach young people how to talk rather than how to live.” This is still true to some extent, in some places, but

the whole tendency of university movement is toward reality and practicality. These critics have not watched this movement. They do not draw their idea of a university from the powerful, well-organized institutions of the day, which lay hold of every various power of humanity and seek to draw it into effective, harmonious action. Rather they picture to themselves the starveling colleges of their youth, where callow boys were driven, against their will, over race-courses of study, no part of which appealed to their own souls or was related in any way to their lives. Such colleges and such ideals of education exist in our time, in certain forgotten corners, but they are in no sense typical of the American university of today. Harvard and Cornell, and the great and growing state universities of the West, are as firmly and thoroughly devoted to the needs of American democracy as the modern harvester is to the needs of the American wheat fields.

No doubt inferior methods, dull, stupid traditions, can be found here and there under the name of higher education, as rusty or worn-out machinery exists under the name of agricultural implements. It is not by these that the best we have should be judged. No one knows better than our college authorities the misfits and failures of education. No one strives half so hard to prevent

them, though in all large enterprises no one can avoid a certain percentage of failure.

Not all the critics in business life taken together have done one-tenth as much to make education practical as has any one of the great university presidents of our time. Let us mention, for example, Eliot and White and Angell and Tappan. Under the hands of these men, and others like these, the whole face of higher education in America has changed in the last twenty years, and the change has been in every way toward greater usefulness and practicality. As the limited express of today compares with the cross-roads accommodation train, so does the American university we all know, or ought to know, compare with the college of twenty years ago. The little curriculum of the college, its Latin verses, mythology, mathematics, and dilute philosophy covered but a small arc in the grand circle. The entire range of the activities of men constitutes the field of the university.

The keynote of railroad progress has been usefulness to the traveling public. The limited express carries well, carries quickly, carries comfortably, accurately, and safely the multitudes of people who demand transportation. Its fresher paint, handsomer cars, and softer cushions are only incidental to this. So with the university of

today. It aims to meet the needs of all men, whatever these needs may be, and of all women, too—all to whom higher training or higher outlook is possible. It meets these needs accurately, safely, and without waste of time or effort. Its greater size and greater impressiveness of buildings, libraries, and laboratories are only incidents. Its purpose is direct, practical, and unflinching. Those who criticise its results must take a broad view of its purposes. Because a Harvard man once drove a street-car in San Francisco, or because some despondent invalid from Yale is seeking a third-class clerkship, is no indictment of Harvard or Yale any more than a chance tramp on a brake-beam is an impeachment of the management of a great railroad.

If the passengers in general rode on the brake-beams in preference to the coaches, it might give rise to an indictment. If the Harvard man of to-day cannot, as a rule, make use of his knowledge, if he cannot take care of himself and open the door of opportunity to others—if the more of Harvard the less of man—then we may question Harvard's right to her endowments. But, as a matter of fact, this is not true. Among men in every walk of life, among our bridge-builders, and our preachers, as among our mechanics, our teachers, our statesmen, our naturalists, our book-

men, our physicians, our financiers, our electricians, our lawyers, and our journalists, the university men stand everywhere at the front. They are effective, enlightened, practical. They have had some one thing clearly in view; they have striven to do it, and to do it so well that their work needs no after-patching.

It is true that this has not always been so to the degree that it is today. Once the college education was not related to life. It did not pretend to be. It had nothing to do with action. It was not even the foundation of scholarship. The scholars of the early days were as much self-taught as the merchants. The school training was discipline only, a drill in memory and discrimination, the things memorized and the things studied to be forgotten when real life began. The original investigator—that is, the real scholar, in any field, in language even—had to begin at the bottom when his college course was finished. He had to find his own materials, devise his own methods, and forge his own implements, just as the self-taught scholar had to do. The man with definite purposes saw his way to his goal outside of college, for the college would not swerve from its mediaeval English ideals a hair's breadth to meet the need of the student.

Learning breeds vanity, someone has said,

while wisdom is the parent of modesty. The old-time college student had learning. He learned rules by heart, and lists of exceptions. He learned the propositions of Euclid, and could repeat every corollary by number. If he studied science, this too was made a matter of names, definition, and exceptions. The best botanist was the one who knew the most Latin names of plants. The best historian knew the names and dates of most kings and the details of the greatest number of campaigns.

The college education was once valued for the feeling of superiority which it engendered. The Bachelor of Arts was as good as the best of men and better than most. "Of all horned cattle," said Horace Greeley, "commend me to the college graduate." He meant the kind which is filled with learning, with a fatuous vanity, which sprouted like the calf's horns. If we define an educated man as one who has learned the secret of power in nature or life, he is not classified with horned cattle. He becomes a man, and to send forth such is the work of the university of today.

It is said by someone that the greatest joy on earth with certain women—greater even than the pleasures of hope and the consolations of religion—is the "well-dressed feeling." We know what this is like and how it affects its possessor,

even though we do not share it ourselves. I saw an example the other day on a railway train. A lady, not graceful nor gracious nor beautiful, was dressed to her own perfect satisfaction. I could not describe the details, which had no special charm for me, but the aggregate was the sure feeling of being well dressed. This showed itself in the expression of her face, at once haughty and beatific. The college degree of Bachelor of Arts conferred on our fathers the well-dressed feeling. They were at once haughty and beatific in the possession of it, and to gain the degree, not to enter into the gathered store of intellectual power, was their purpose in running over the prescribed curriculum.

But whatever we may say of outworn methods, they were not without their successes. In these the old college found ample justification. Mental keenness follows mental friction. The spirit of comradeship led to a higher spirit of friendliness and mutual help. The debating society, where alone—outside of school hours—real subjects were under discussion, laid the foundation of many a statesman's prominence on the floor of the senate.

To spend four formative years in life not sordid has moral reflex on the character. The weakest and most illogical college course may be far bet-

ter than no college training at all. Men can make up for lost time; it is harder to make up for lost inspiration. The American college of the past was a feeble copy of the colleges of England. The American university of today draws its inspiration from the deeper, stronger currents of German scholarship.

An Oxford man has recently criticized the splendid aggregation of great boarding-schools which modern needs are slowly and reluctantly molding into Oxford University. "Our men," he says, "are not scholars; our scholars not men." The old ideals of education still cherished at Oxford too often lead to this. Those called scholars—the dig, the grind, the pedant—are not men. Their worth is not related to life, and they are not trained for living. The other class—the athletes, the good fellows, the robust British gentlemen—these are not scholars. For the lines of thought and action which interest the live man are not reckoned as scholarship in England.

To know nature, life, art, one must go outside the Tripas or three sacred pedestals of learning—Latin, Greek, Mathematics—recognized by the conventional college. To the university of Germany we go, or to the university of America, and in these institutions of reality every man in search of wisdom or power will find his efforts strength-

ened, his success hastened. The ideal of the American university of today is expressed in the words *constructive individuality*. It would build up scholarship and character, but always on the basis of the powers which nature gave the individual. It is no abstract or ideal man with which it deals, but real men, just as they are, the individuals as created—no two alike, each with his own divine gift of personality, which separates the man that is from all the men that are, or were, or ever will be.

I have used the words “college” and “university” in an interchangeable sense. This I have done on purpose, for I do not believe that the distinction, which seems to exist, and on which some writers have laid great emphasis, is one which can or ought to be permanent. From the extension of the college the American university has sprung, but every one of these institutions still includes, and must include, the college, which is the germ. Every successful college points toward the university, and, so far as is possible, it strives to become such. The university is the expression of thoroughness of training, and without thoroughness in something no institution can live.

It is said that the college is for the average man, the university for the exceptional one. But this is not true, as a matter of fact. The average

man, the exceptional man, and the man below the average are found in all institutions. The "*bemoostes Haupt*," the moss-grown head, grown gray in the struggle for a degree, is well known in the universities of Germany, while the smallest college of the prairies has been the cherishing mother of many a distinguished scholar.

The fact is that the college is a temporary feature of American educational history. The college is a small university, antiquated, belated, arrested, starved, as the case may be, but with university aspirations to be realized in such degree as it can. The strongest of these find an assured place by the side of the universities—Brown University and Amherst College, Wesleyan University and Williams College, Colgate University and Bryn Mawr College. These belong to a single general class, and differ only in name. Each gives the best and broadest undergraduate courses its finances afford, with as extended a course in graduate study as circumstances make possible. Harvard is the same in kind, though its extension is greater, while the ambition of the college of the prairies is not less nor different.

As time goes on, the college will disappear in fact, if not in name. The best and richest colleges will become universities, following the example of Harvard, Yale, and Princeton. The others will

return to their places as academies, fitting men for college, as they now try to fit them for the university. Every year shows both these forms of transition. In the last ten years at least a half-dozen of the California colleges have joined the ranks of the high schools, ceasing to grant academic degrees. In other Western and Southern states the same change has taken place. On the other hand, twenty institutions, which have prided themselves on their contentment as "mere colleges," have reached out, in one way or another, into graduate work, and many rest their best fame on the influence of some teacher whose originality and thoroughness gave his work the true university character.

Since Eliot became president of Harvard University, the number of college students in the United States has increased perhaps a hundred-fold. This is due to no educational fad, no passing whim of the hour. Young men and young women do not rush by thousands to the universities every fall because they seek social recognition, because their fathers went to college, because they need a college degree in their business, because of the glory of the football team, nor for any one of a hundred side reasons which might be conjured up. They go to the university because the university offers training which they want, and which

they cannot do without, except at a cost which will narrow and cramp their whole after-lives.

The student of today is far more advanced in thought and action than the student of thirty years ago. The graduate of Harvard under any of Eliot's predecessors could barely enter the Freshman class in the Harvard of today. Not that he had not studied enough things or spent time enough on them, but because the work of earlier times lacked thoroughness, breadth, and vitality. In one or two narrow lines some great teacher might make his work thorough and real, but that a student should actually know anything so as to be able to make a place in life by means of such knowledge was to most of Eliot's predecessors a new and dangerous notion.

This condition of things was changed, not by outside criticism, the chance slurs of men of business or men of leisure, but by inside growth.

It was thirty years ago that Agassiz told his associates that Harvard was no university—"only a respectable high school where they taught the dregs of learning." He recognized that for most men the sacred Tripas was not the foundation of culture, but the dregs of culture. Its place of importance was assigned, not by hope, but by tradition. It was the same good old Harvard which Emerson blamed for never having led him to the

tree of life. But even Emerson was appalled when the study of realities invaded Harvard College, and men began to give themselves not to ideal and tradition, but to serious preparation for the work of life. Once he hinted that "a check-rein should be placed on the enthusiastic young professor who was responsible" for the destruction of Harvard's time-honored symmetry.

In Agassiz's answer we touch the keynote of university progress—not to check the current of effort for symmetry's sake, but to stimulate all possible forms of intellectual growth. "If symmetry is to be obtained by cutting down the most vigorous growth," he said, "it would be better to have a little irregularity here and there."

It is thirty years since Herbert Spencer startled the English educational world by his question: "What knowledge is of most worth?" For the men of Oxford and Cambridge did not value knowledge for its worth, but rather for its traditional respectability. They defined a university as "a place where nothing useful is taught," and they had only contempt for "bread-and-butter learning," or knowledge related to daily life. This might do for the learned professions—law, medicine, and theology—but even for these the college gave no hint of direct preparation. Herbert Spencer answered his own question in favor of

science, the facts and laws of human life and of external nature. These have a real worth to man, which the sacred Tripod did not possess. On the belief that knowledge of all kinds has real worth to some one the modern university rests.

At Champaign, ten years ago, I had occasion to say: "The university should be the great refuge hut on the ultimate boundaries of knowledge, from which daily and weekly adventurous bands set forth on voyages of discovery. It should be the Upernivik from which polar travelers draw their supplies. As the shoreless sea of the unknown meets us on every side, the same house of refuge and supply will serve for a thousand different exploring parties moving out in every direction into the infinite ocean. After countless ages of education and scientific progress, the true university will stand on the verge, its walls still washed by the same unending sea, the boundless ocean of possible human knowledge."

The college of the past dealt chiefly with record and tradition. It sought no new truth and coveted no action. The college life was a period of restful growth, to be cherished for its fragrant memories. It was not a time of forceful struggle for heightened power and deeper wisdom.

The university of today is alert to all the problems of social and political development. The

poorhouse, the jail, the caucus, the legislature, the army, the discordant demands of freedom and order—all these call for closest attention on the part of the university student. While one man studies the law of heredity as shown in the structure of the body cells, another gives equal attention to the fate of the tramp and the pauper. One spends his strength on the economical transference of electric force while another works on the conservation of honesty in the public service. There are just as many classical scholars today as there ever were, but they no longer bar the way to men of other powers and other tastes. The classics no longer close the door to other forms of culture. He who writes Latin verses still finds his place in the university, provided only that his verses are good enough to be worth writing. But he no longer occupies the sole place of honor, or even the front seat in the lecture hall. The man who knows the steam engine has an equal place in the university and an equal share in the honors of scholarship. With the advent of realities, spurious honors disappear. It is not for the university to decide on the relative values of knowledge. Each man makes his own market, controlled by his own standards. It is for the university to see that all standards are honest, that all work is genuine. To do this, it must cast off many

of its own shams of the past. Its titles and privileges, its prizes and honors, its distinctions and degrees, its caps and gowns, and chaplets of laurel berries—all the playthings and millinery of its youth it must cast away with its full maturity. These prizes of learning are but baby toys to the man of power. To send forth men of power the university exists.

The value of the university has been under discussion ever since the days of Alfred and Charlemagne, and each nation in each century has formed its own answer. Its value to a monarchy is not the same as its worth to a republic. Its value to the all-embracing church is not the same as its use to the individual man and woman. The church looks to the university for its defender and its apologist; the individual man for his own enlightenment and strength. The king looks to the university for agents and advisers, democracy for the antidote to the demagogue and spoilsman. Emperor William is reported to have said: "Bismarck and von Moltke were but the tools by which my august grandfather worked his will." To furnish the emperor with tools of such edge and temper is the function of the imperial university. Tools of a still more august ruler are the statesmen of America. Our Washingtons and Lincolns, our Sumners and Hoars, our Lowells and

Emersons—all these are the tools by which the people of the Republic work their will.

To such needs the modern university is fully alive. Edward Everett Hale tells us that in 1860, when Robert Todd Lincoln entered Harvard College, bringing letters of introduction from Abraham Lincoln and Stephen A. Douglas, there was but one man in Harvard who had ever heard of Lincoln. This was Professor James Russell Lowell, who said at the time: "I suppose that I am the only man in this room who has ever heard of this Abraham Lincoln, but he is the person with whom Douglas has been traveling up and down in Illinois, canvassing the state in their new western fashion as representatives of the two parties, each of them being the candidate for the vacant seat in the senate." That Harvard was not long indifferent to what Lincoln stood for is shown by the roll of names in her Memorial Hall; the list of

those whose faith and truth
On war's true touchstone rang true metal.

Once awakened to her public duty, our great university has never since slept. Her hand is in all public affairs. Whatever is well done is permeated by her wisdom and zeal, and the courage and force of her sister institutions.

One can count on his fingers today, taking

every one, university men without public office or likelihood of any, investigators and professors, who exert a greater influence in any political crisis than presidents and cabinets, than orators and agitators, than admirals and generals. The immediate responsibility for action rests with the temporary official, but behind the investigator is the power of eternal truth. Whatever men do or say or pretend, it is the truth that has the last word. This is so sure in the affairs of men that when truth appears plain before them they throw up their idle weapons and call her God or fate. And these, indeed, are other names for truth. For the worship of truth the university must stand, and there is but one formula for her ritual. He shall seek her patiently, untiringly. If perchance he find her, then shall he proclaim her without fear and without reserve.

The American university serves the American Republic in several ways.

It intensifies individual force and effort. It takes a man's best abilities and raises them to the second or third or tenth power, as we say in algebra. The value of the college-bred engineer is recognized in the railroads, in the mines, in the factories. With the same willingness to work as the man who has learned engineering by rule of thumb, he has a far greater adaptability, a far

wider command of resources. This fact may not appear in a day or a year; hence some men prefer the ordinary practical man, because he is less ambitious and can be had cheap. Sooner or later, however, a condition arises which shows the difference. The wise employer forecasts this and puts the responsibility on the man who is surest to carry it when the real trial comes.

What is true of the educated engineer is equally true in other trades or professions. The ignorant physician makes money because he deals with ignorant men, and the grave covers his blunders. But sooner or later truth turns her searchlight on pretense, and the educated physician and the fraudulent healer are no longer in competition.

The university of today has no new mission in these regards. Its purpose has simply broadened year by year till it covers the needs of every man with brains and conscience. Not only for the Greek-minded and Roman-minded men, but for the men of dynamos and sewer trenches, the breeders of sheep and the importers of silks, for the singer of songs and the writer of histories, for all men, of whatever calling, the university has its word of welcome, its touch of power.

The university should give to each man or woman a broader outlook on the world, the hori-

zon of the scholar. No one has the right to the name of scholar till he knows some one thing thoroughly, and enough of other things to place this special knowledge in right perspective. The more deeply one enters into his own thoughts, the more effective he is in accomplishing his own ends. The more broadly he enters into the thoughts of others, the more clearly will he understand his own relation to nature and society.

Through the medium of the university the student is brought face to face with great thoughts and great problems. The wise men of all ages and all climes become his brothers, and the consolations of philosophy to him are not meaningless words, but living and helpful realities.

The university is a source of personal acquaintance with the men and women who shall mold the times to come. The university "gathers every ray of various genius to its hospitable halls, and, by the concentrated fires, sets the heart of youth on flame." Each university has some great teacher, at least some one who is relatively great. A great teacher leaves a great mark on every student whose life he touches. In my own education nothing meant so much to me as the contact with a few great men whom I knew face to face. Of these I place first Agassiz, with his abounding life, his fearless trust in God and man, and his vital

interest in everything that God or man had done. "There is no hope for you," says Thoreau, "unless this bit of sod under your feet is the best for you in this world, in any world." Of such robust optimism was the spirit of Agassiz. No obstacle could break his courage, no failure could dim his faith. To feel the influence and to share the help of such men far outweighs the cost of any college course, even though the college gave nothing else.

But there were many more among my teachers, each great in his degree. I cannot take the time to speak of each in turn, nor would it profit you to listen. Two names may suffice. Andrew Dickson White, the former high-minded and enlightened president of Cornell, the ideal of our class, the pioneer one in his administration of the new university on his hands, embodied all that a scholar should be in the life of the republic. And such an ideal of the scholar in statesmanship President White remains to us today.

The other name is that of James Russell Lowell. I can hardly claim him as my teacher, for he did not know me by name or face. I was too young and too raw in his day to be knowable. Yet his rich voice and manly figure are indelibly fixed in my memory, and his noble face rises before me whenever I try to think of the duty of the scholar in the crises of the day.

Once to every man and nation comes the moment
to decide,

and to have known Lowell brings a pledge for at least a conscientious decision.

But it is not alone through the teachers that the university educates. The "fellow feeling among free spirits," which has been called the essence of the German university, arises among the students as well. Among the college students are the best young men and women of our time. They shape each other's characters and mold each other's work. If the university does nothing else, it finds its justification in the friendships which it gives. In Agassiz's eulogy on his friend and helper, Humboldt, he gives a most striking account of the influence picked men exert upon each other. Teachers and students alike in the University of Munich used to gather in Agassiz's own chamber, "museum, laboratory, library, bedroom, dining-room, fending-room, all in one." Students and professors called it "the little academy."

Here they worked and talked and thought, and the discovery of one became the property of all, with the same cheerful generosity by which they shared their meals and their earnings. In the college you find the men you trust in after life, and one who does not fail you there will never after give you cause for regret.

To the university we must look for the promotion of true democracy. Its function as a part of public education is to break up the masses that they may be masses no more, but living men and women; to draw forth from the multitude the man. The mass is the real foe of democracy, for the slave in all ages has woven his own lash. Where men are driven or sold like sheep, there the tyrant rules. It matters not whether the tyrant be a king in velvet and satin, or a ward boss in a slouch-hat and striped waistcoat; when individual intelligence does not rule, men are governed by brute force.

The function of democracy, as I have said many times, is not good government. Its effect is to stimulate the people to broader outlook, to deeper interest in public affairs. It is not to make good government, but to make good citizens, that public affairs are confided to the common man. The feeling of caste is fatal to democracy. The fundamental tenet of civil freedom is equality before the law. In other relations it matters not what inequality develops; the more unlikeness among men the better, because the more varied the power and talents. But unlikeness is not inequality. As "God is no respecter of persons," so the law must not be. The state must show no favoritism. It knows no black nor white, no wise

nor simple, no bond nor free. If it place one class above another, it is a democracy no longer, and it is not a democracy when any class of men tamely accept an inferior place as theirs by right of birth.

The old education seemed to accentuate the inequalities among men. This was because it took its traditions from aristocratic England, though its real effect was to promote democracy. The great service of the state university, the cap-sheaf of the public school system, is that it carries the university into democracy without impairing the essential qualities of either. It furnishes a plain way for every student, the highest as well as the lowest, from the commonest schooling to the training that gives the highest power. So long as the grass does not grow in "the path from the farmhouse to the university," to borrow Ian MacLaren's phrase, so long is the Republic safe. So long as the people can become enlightened and wise, rich and poor alike, so long shall government of the people, by the people, and for the people endure upon the earth.

The need of democracy makes a special demand upon the scholar. "Eternal vigilance is the price of liberty," and to the scholar on his watch-tower the people look for this vigilance. It is the scholar's duty everywhere, in season and out of

season, to uphold the sacredness of truth. He must possess, to quote Huxley's words, "some knowledge, to the certainty of which authority could add or take away neither one jot nor tittle, and to which the tradition of a thousand years is but as the hearsay of yesterday." The truth it is the scholar's privilege to speak, his duty to proclaim, and that he does this is the best justification of the university from which he drew his inspiration.

"Above all sects is truth." Above all parties and conventions, above all pride and prejudice and passion, arise the teachings of nature, the lessons of human experience. To hear these teachings, to learn these lessons, is the function of the university. To proclaim them wisely is the function of the scholar, and it is his mission to help permeate the Republic with his scholarship. The university must place as fixed beacons in the swaying tides of democracy those men and women who can never be moved by feeble currents, who know what to do, who have the will to do it and the courage to abide the consequences.

And now, in a final word, I touch the university's highest value. There is no good in a man's work unless the man himself be good. The highest force of the university lies in its moral training. Not in its precepts and in its sermons, not by

ceremonies and formulae, are men influenced for good. If they were, moral culture would be the easiest of all teaching. Nothing costs less than words. But the experience of the ages shows that words count for little in matters like this. It is the contagion of high thought, of noble purpose, of lofty deed that "strikes the heart of youth in flame." "Science," says William Lowe Bryan, "knows no source of life but life. If virtue and integrity are to be propagated, it must be by people who possess them. If this child world about us that we know and love is to grow up into righteous manhood and womanhood, it must see how righteousness looks when it is lived. That this may be so, what task have we but to garrison our state with men and women? If we can do that, if we can have in every square mile of our country a man or woman whose total influence is a civilizing power, we shall get from our educational system all that it can give or all that we can desire."

Wisdom, as I have said elsewhere, is knowing what to do next. Virtue is doing it, and religion is the heart-impulse that finds reason for wisdom and virtue in harmony with the first cause at the heart of things. To these matters the university can never be indifferent. Wisdom, virtue, and religion alike it is its province to cultivate and intensify. It can accept no shams in wisdom, still less

in virtue or in religion; but a life without these is the greatest sham of all. The university cannot promote virtue and piety in any machine fashion. If the college stand *in loco parentis*, with rod in hand and spy-glasses on its nose, it will not do much for moral training. It will not make young men moral nor religious by enforced attendance at church or prayer-meeting. It will not awaken the spiritual element in their natures by any system of demerit marks. This the college of our fathers in English fashion tried to do, and with such ill success that the university of today bears among the ignorant the reproach of godlessness.

What the university can do is along manly lines. It can cure the boy of petty vices and childish trickery by making him a man, by giving him higher ideals, more serious views of life. It may win by inspiration, not by fear. It must strengthen the student in his search for truth. It must encourage manliness in him through the putting away of childish things. Let the thoughts of the student be as free as air. Let him prove all things, and he will hold fast to that which is good. Give him a message to speak to others, and when he leaves the university you need not fear for him, not the world, nor the flesh, nor the devil.

The universities of America have grown enormously in wealth and power within the last

twenty-five years. The next twenty-five years will tell the same story. They have the confidence of the people because they deserve its confidence, and the good citizens of the Republic must give them trust and support. In the university, at last, the history of democracy must be written.

III. THE AMERICAN UNIVERSITY SYSTEM, PAST AND PRESENT

THE AMERICAN UNIVERSITY SYSTEM, PAST AND PRESENT

STRICTLY speaking, in spite of apparent uniformity, the university system of America is fortunately not a system at all, for standardization lies at the heart of system. One may standardize buildings, departments, endowments, entrance requirements, fellowships, titles — scholarship never. Its very essence is divergence, and it may follow any one of the myriad roads that lead outward, backward, or forward into the unknown.

In the fact that our institutions do not yet form a system lies their hope for the future. Each one expects to mark yearly advance. In some quarters, this anticipated movement is backward, toward ideals other than scholarly—bigness, buildings, numbers, athletic victories, expansion of courses of study, and extension of influence in directions in which training of the intellect is subservient to “getting on.” The pull of tradition and the impulse to go with the crowd are very strong, even discouraging. Nevertheless, the world does move, and each year the dictum of Lord Bryce becomes more and more pertinent: there is nothing in America of which she boasts less and nothing of which she has a greater right to be proud than her universities.

During my experience as a university administrator, and since as well, I have stood for freedom of choice of studies, regarding all prescribed university work as a needless burden except where the subjects interlock, one resting on another. I also favor the student's early choice of a specialty under the personal advice of the professor in charge of that particular subject. I further believe that no student should be diverted from his best interests through the bait of honors or even of a degree. Neither should any teacher be turned from his best service by the demands of organization, or the whim of deans or presidents.

Furthermore, I am convinced that our universities at present begin their work too low down, and that many of them enroll far too many students to permit personal justice to the individual. The "rah-rah" stage of youth is a vitally important period and deserves careful training. But the effective teaching and personal influence constantly needed for the "lower division" group cannot be had in overcrowded institutions nor from inferior or inexperienced teachers. Moreover, the vast libraries and facilities for research provided at our great institutions are not utilized by elementary students whose presence serves to minimize the importance of such facilities and to

check their utilization. Incidentally, I should still welcome the general abandonment of the Bachelor's degree. Indeed, so long ago as 1887, in an address at Indianapolis, I set forth my opinion that the Bachelor's degree was, on the whole, a hindrance rather than help to higher education in America. Its aims are too low to represent serious finality in education. It comes later than the period in which advanced study in some particular direction should be begun. As a lure towards keeping one longer in college than would otherwise be the case, it has no real value. Studying for a degree is hardly worth the name of education. In such cases, the chief value of a Bachelor's degree is to mark off for social purposes a certain number of university men and women as graduates, a matter of some importance in Alumni Associations, even though now ignored by most of them.

A forward step in this, as heretofore in other directions, has been taken lately by Johns Hopkins University. This institution proposes to give up elementary (Freshman and Sophomore) work, ceasing to grant the Bachelor's degree, its lowest academic title being that of Master of Arts.

In this movement all the large privately controlled institutions must sooner or later follow. In endowment, few of them can long compete

with the great state institutions, and they can find permanent place largely through higher and better instruction and, in particular, by taking up lines of advanced work on which institutions supported by popular taxation find it more difficult to venture.

At this point, also, I may as well indicate my attitude concerning honorary degrees. The main purpose of the university is training, and its various degrees are essentially certificates of the amount and nature of its training. An honorary degree is, even at its best, something quite different—a tribute to character, education, or achievement outside the academic walls.

The objections to the practice of conferring such a form of honor lie largely in the ease with which it is abused. The degree of LL.D. falls often to individuals of merely temporary prominence—politicians, officials, or headliners of the press—or to a merely wealthy man from whom possible gifts may be expected.

Some institutions have granted the degree *ad nauseam*, others very rarely, and a few, notably Cornell and Stanford, practically not at all. Some limit the title to those who have had, in one way or another, an integral relation to the institution concerned. Still others have recognized mainly presidents of sister universities, especially when

they have been called in as commencement "orators." At the fiftieth-year celebration of the University of Wisconsin, each department chose from its colleagues in other institutions some professor it delighted to honor. But great is the outside pressure on officials of universities granting honorary degrees, the weight of persistence being usually in inverse ratio to the fitness of the candidate proposed.

The degree of Doctor of Philosophy is no longer granted as purely honorary. That of Master of Arts is still offered to persons worthy of friendly recognition but of less public note than those selected as Doctors of Laws.

The fact of overcrowding brings a number of associated evils. Among these is the use of the lecture system as a short cut in instruction, thus making it a substitute for study. Instead of its normal uses as a means of inspiration, of broadening outlook, and of co-ordinating knowledge, the lecture tends to drop into mere information-giving, followed by examinations which test the memory of what the teacher says rather than the degree of thought or observation a student has given to the subject-matter. The great increase in numbers tends also to stress standardization and routine at the expense of initiative and individuality.

Another evil phase of overcrowding is the forcing downward of salaries, combined with the tendency to make them uniform. The American university lives close to the bone and pays its staff all it has at its disposal. A university, even a good one, costs a large sum of money. Teachers in these days of high cost of living are as a whole grossly underpaid or (more accurately) paid without discrimination — “equal pay for equal service,” when services are, in the nature of the case, very far from equal. For in every institution, the chief educational values come from the work of relatively few men or women, great in their humanity as teachers, scholars, or leaders in research. Research conducted by and for the professor alone, indeed, is of secondary value to a university. Every actual investigator should have the ambition to develop a group of disciples sharing his enthusiasm and his methods, whether or not they reach his conclusions. In the German sense, he should aspire to build up a “school” of research.

The primary aim of the university, therefore, should not be to give information or opinions or trade skill, but to place the student in contact with sources of knowledge and opinion. Its proper ideal is not a standardized intellectual product, as some have asserted, but men and women

trained to observe, experiment, and think for themselves, as divergent in their various geniuses as the human mind itself. In the words of Felix Adler, its high function is "to release the personality in every individual." Moreover, as contact with righteousness at work is the basis of all moral training, a degree of austerity in matters of mind and morals should characterize every worthy institution.

In the pages that follow, also, I touch on certain other temporary extraneous obstructors of good work and have furthermore ventured to discuss the relation of the executive head of the American university to the needs and achievements of the institution directed by him. To sum up briefly here, however, the main purposes of this discussion, I would appeal to our universities to treat young men and women who hope to be scholars and leaders as individual units, not as cogs in a prearranged system of routine—to bring them into contact with realities—to give them the chance to think for themselves and to enjoy the process—and, above all, to provide that impact of ideas and morals by which the scholars of one generation become the masters of the next.

The culmination of higher education is to help a man to find himself, to realize that he alone is responsible for his convictions and acts. Only the

educated man has any convictions; he knows how convictions should be formed; what he believes, he takes on his own evidence, not because he finds it in the creed of his church or the platform of his party. To own oneself, to be master of one's soul, constitutes the reality of freedom. In the long run it is the parent of all other forms of freedom. "I have nothing mine," says Montaigne, "except myself. The greatest thing in the world is for a man to know that he is his own." "At the last," wrote Emerson, "nothing is sacred save the integrity of your own mind."

From intensified and vivified individualism, the highest altruism naturally springs. We cannot share our possessions, material or spiritual, with others, unless we have something to share. "Only man stands between God and the mob," so Emerson again reminds us. The first duty of all education is to equip men and women capable, if necessary, of standing off the mob, both intellectually and morally.

The record of the American University registers its gradual escape from a curriculum established by tradition into the free air of a broader conception of the value of intensive training to the individual and to the community. This involves recognition of the fact that the essential

feature in higher education is not the course of study but the student. It is more and more widely realized (though still imperfectly) that there is no exclusive road to culture, and that different studies have different values, varying with the powers or purposes of the person pursuing them, and with the method by which those subjects are presented.

The old college course of fifty years and more ago grew out of the English traditions as to the proper equipment of clergymen and gentlemen. It consisted mainly of Latin, Greek, and Mathematics, ending with a final dash of safe and sane, although medieval, philosophy, dating from the infancy of science and presented for the purpose of rounding out culture with character. As time went on, however, in America more or less of other subjects was grudgingly added, mainly with the hope of placating youths not content with traditional routine. A prearranged curriculum, or "little race-course," with a prescribed number of hurdles to be leaped in a definite number of years to gain the baccalaureate, the wreath of laurel berries, may be compared to suits of ready-made clothing, which fit nobody but are accepted by the indifferent. Historically, the curriculum was one of the many traditions that all knowledge and religion should be received from the hand of

authority, not derived from individual contact or verified experience.

“Free should the scholar be, free and brave,” asserted Emerson. The old college course, nevertheless, was not free but bounded on every side. It allowed no “waste of time” on subjects not required for the conventional degree. Much effort, also, was spent in making one Bachelor of Arts as much like another as was possible with unruly human material. Holding such aims, the college reached relatively few—helped still fewer—though in fairness it must be said, of course, that the early history of higher education in America reveals several leaders especially notable for their influence and inspiration as teachers. Among these were Hopkins of Williams, Nott of Union, Horace Mann of Antioch, Tappan and Angell of Michigan, Chadbourne of Wisconsin, Northrop of Minnesota.

As discontent with the current curriculum (and, in fact, with any prearranged curriculum at all) spread in America, it assumed the form of a general demand for better knowledge of science, history, modern literature, and the various interests involved in a new revival of learning. This epoch was to a large degree ushered in by Louis Agassiz. The Harvard of the 'fifties he thought “a respectable high school where they taught the

dregs of learning." The backbone of education he proclaimed to be thorough first-hand knowledge of something, and his students found in advanced research in realities a training and stimulus foreign to the conventional college course.

"There can never be any sound teaching in Zoölogy," he used to assert, "nor for that matter in anything else, except through actual contact with the things studied." Which is to say that the student must secure and verify his facts and then frame his inductions. These can be checked up and broadened by lectures and books; but the axis of scholarship must be one's own. The introduction of this idea into the teaching of Law vivified the whole subject and made the Harvard Law School the most effective of its type in the world. The essence of the Langdell method is to substitute for lectures on legal principles a personal study of individual cases and the actual decisions in regard to them, by which process the student can draw conclusions and strengthen his perceptions of the workings of law.

The nature of the traditional curriculum of that day was well expressed by Dr. Noah Porter, the venerable president of Yale, as quoted by Henry Holt: "We could not provide for special talents and we had to give something the general run of the boys could chew on; it didn't matter

much what." But to develop the youth of special talents is the crowning work of the college. Moreover, it does matter enormously what "the boys chew on." In the words of Frederick Denison Maurice: "I know that nine-tenths of the men the university sends out must be hewers of wood and drawers of water. But if you train the ten-tenths to be so, the wood will be badly cut and the water will be spilt. Make your system of education such that a great man may be formed by it and there will be a manhood in your little men of which you do not dream."

The first great leader in the direction of freedom of study was Eliot of Harvard, the pioneer in the elective system. It is easy to stand off and enumerate the shortcomings of students trained under this regimen; they are abundant and visible, though far less so than under any previous arrangement. No plan of studies will make a scholar out of an idler; yet with freedom an idler may find himself. The element of consent is vital to mental progress. Thorough learning must have, for the most part, volitional or vocational incentive. In other words, the scholar must love his work for its own sake, or he must realize that professional success depends on a grasp of its basal details. Setting aside prescribed courses, Eliot made the work at Harvard all elective, no

subjects being required except those which interlock to form the foundation of what comes after.

The extension and expansion of scholarship soon followed like a rush of water from an opened dam. Choice of subjects kept the student alert; choice of teachers served as an equal impulse. Boys in earnest now set the pace for the others, while at the same time their presence in the classroom gave vigor to the instructor. Thus the reluctant student more or less definitely ceased to block the way, and the teacher, relieved from the task of plodding and prodding, felt renewed zest in his profession.

To condemn the elective system because it does not make a scholar out of every youth it touches is to show little conception of the rank failure of the old régime. Those who have criticized President Eliot's unreserved adoption of the new plan forget or never realized the intellectual lassitude among young men submitted to a pre-arranged discipline which awakened no interest and had no visible relation to present tastes or future career. Volition or vocation, one or the other, I repeat, is the backbone of scholarship. Men and women draw mental nutriment from what their minds digest. Scholars must make themselves, and they find joy in the process.

Another great advance in higher learning

came through Dr. Andrew D. White, first president of Cornell. This innovation was called by his students the recognition of "the democracy of the intellect." Under the old system, as already indicated, certain favored studies were laid down as fit for superior minds, and needful for all others. To "Greek-minded or Roman-minded men," to use Emerson's phrase, the old classical training was, of course, more or less adapted. "Only those speak of forgetting Greek who never knew it," remarked Thoreau. But there are many other types of mind equally strong and worthy of cultivation. The faculties of the young chemist or naturalist or engineer have their own requirements. Ezra Cornell, with that truth in mind, proposed "to found an institution where anyone could find instruction in any subject." Being in perfect accord with the idea, White (with whom the formal expression of it probably originated) decreed that in the new institution all powers of the mind should be treated as equal so far as university guidance was concerned. Agriculture, engineering, mechanic arts, applied science—and science not yet "applied"—were thus granted full recognition along with the humanities. In the opinion of both Founder and President, it is not the function of the university to choose in advance for all individuals, but to provide as well as possible for

each person concerned. At Cornell, therefore, the end in view was variety and divergence, so that every student might make the best of whatever ability he possessed. The greatest treasure of a nation, as Dr. White often said, "lies in the talents of its children," and these diverge in every conceivable way.

From the first *Cornell Register*, 1868-69, I quote the following, written by the president himself:

"The idea of doing the student's mind some vague general good by studies which do not interest him, does not prevail. The variety of instruction offered enables him to acquire such knowledge as is likely to agree with his tastes, encourage his aspirations, and promote his work in life."

Liberty of choice, as already said, was first fully granted at Harvard, although Cornell earlier recognized in staff and equipment the equal needs of all types of students. And at Cornell as well as at Harvard, the movement was away from standardization. With Gilman of Johns Hopkins and later Hall of Clark came official recognition of another vital fact, that *advanced* study in a chosen line counts for more in mental development than elementary work in various lines. To know something well is the foundation of scholarship. It gives mental and moral courage, preserving the

student at once from cheap conceit and limp humility. It also gives him a base-line by which to measure the attainments of other men—as William James used to say, “to know a good man when he sees him.” It saves him from being a charlatan himself, protects him from the charlatanism of others. The influence of Johns Hopkins spread widely among American teachers, and its example has been potent in building up our highest university ideals.

Meanwhile, another useful innovation made its appearance at Indiana University, to be further developed during the 'nineties at Stanford, then a new institution, free from tradition, its finger-posts all pointing forward. By that arrangement, each student was early asked to choose a “major subject” to be steadily pursued under the specific direction and advice of its head professor. This plan insured the youth a fair command of something and an acquaintance, more or less intimate, with a man who had succeeded in the line he himself planned to follow. It led the student to give early thought as to his own future, a matter of large and often vital importance. In one form or another, such modification of the elective system has been frequently adopted in other institutions as especially fitted for those of marked talents.

From the weight of required studies planned for purposes of "general culture" only, the American University has now been largely relieved. But the dead hand still lingers as tradition and inertia, influences felt by student and teacher alike. Its effect may be discussed more or less at length under three heads: Standardization, Information-giving, and Routine. Of these topics I shall only briefly discuss the first and third. Under the second, Information-giving, I shall include the lecture system in general and treat its abuses at some length. Other evil burdens, some of which will be later considered, are of secondary importance, at the worst merely temporary. Outside influence, for one thing, may sometimes hinder research or, more often, check expression of truths unpleasant to ignorance or partisanship. These handicaps, however, are largely local and their actual effects are in the long run virtually negligible. On the whole, the academic world has and will have all the freedom there is, and more than commonly prevails in other professions. In general, also, no other body of men is so resistant to coercion or contamination as a university faculty, no other class freer from outside restraint in thought and expression. True freedom, here or elsewhere, is mainly individual—the capacity to develop and to respect the integrity of will and

mind. The professor finds his limitations (whatever they may be) chiefly within himself or at least inside academic walls rather than without. When he leaves his own field of research (as he should at times) for the public forum, he has to take his chance with other reformers and agitators.

As for the matter of Standardization, we note that teachers feel a natural impulse to classify, to bring varying elements into some degree of uniformity, even at a loss to individuality. The average instructor delights in method and regularity. The best teachers, however, rise above this, and to them each student is a fresh problem. Books can be classified and shelved, students never. Yet it is simpler to standardize than to develop. Examination is the basis of standardization, a fact which in England has brought about that anomaly, the "examining university," where the student learns through books chiefly and at home, as distinguished from the "teaching university," where one studies with men. In the "examining university" the teacher is a minor element, the main aim being merely a degree. Examination has its important pedagogic place, of course, but its true rôle is a secondary one in the serious training of scholars.

The next unfortunate tendency, now rapidly

growing with the great increase in student numbers in America, is the dispensing of second-hand information in place of training in the pursuit of truth. Information-giving is simple for teacher and student alike, as it follows the line of least resistance. How easy for the teacher carrying a plenteous pitcher to fill all the little student cups at one sitting, rather than lead the way to the well! This sort of thing can be done and often is done by men without the slightest conception of the realities of teaching and without a glimmer of personal responsibility to the youth. "Sprinkling with an intellectual hose" is a student's summing up of the process. With our vastly widened range of knowledge comes expanded monotony of method, a tragic stifling of normal initiative.

Dr. Michael Pupin writes in his autobiography, *From Immigrant to Inventor*, of his disappointment at the University of Cambridge in finding that instruction in Physics involved "information instead of contact." He wished not to be merely informed of discoveries made through instruments of precision, but to gain skill in handling such instruments for himself and thus add his own precision to theirs. As I said long ago about elementary teaching in Physics, it is not enough to tell the boy that a magnet attracts iron; he must himself feel it pull.

Darwin, also, in his generation spoke of the lecturers on Geology at Edinburgh as being "so incredibly dull" that he made up his mind not to listen to any more, "nor even to read a book on that subject"; but when he came into contact with rocks, he took a very different attitude. Such acquaintance with realities should be the vital part of the earnest student's education in any field.

Yet under the old régime, now being revived in various quarters, the sciences (when taught at all) were everywhere handled in the deadening way too frequently employed for the humanities. A lesson having been previously assigned in the textbook, the professor called on various members of the class to recite, and carefully marked down the numerical values of their responses, 40, 50, or 90 per cent, according to the docility or intelligence of the individual or the temper of the instructor at the moment. The instructor also kept a careful record of absences, a certain number of "cuts" being allowed, however, to relieve the monotony of the classroom in which all suffered from boredom together. This method was supposed to lead to culture—as it did to some extent—but the route was tedious and arid, and the culture, good or bad, was largely absorbed from one's fellows or in the clash of debate. What wonder that lads who had thus agonized together used

to meet at midnight at the end of the term to burn Euclid or the Anabasis! Nothing is of much aid to intellectual training if at the first opportunity one casts it joyously aside. But do the young fellows of today burn their volumes of history, science, or engineering?

In its most pronounced modern phase the evil of Information-giving rests on a method developed abroad, and thought more or less rightly, when introduced here, to herald a new era in higher education. Thus, when our serious scholars began to go to Germany for study, they there found the "lecture system" in vogue. The professor, for instance, did all the talking; that is, there were no recitations, the nearest approach to recitation being the discussion of advanced ideas in a small group known as the *Seminar*. This method, to be sure, had its defects even in Germany. Some professors were always dry as dust; many regarded their work as wholly ended at the lecture-room door, while still others lost all relation to exact fact in pursuit of fantastic theory. Many again thought the nominal office of *Geheimrat* or Privy Councillor more important than scholarly achievement. Some, however, spoke with learned precision; some lighted up their discourses with the fire of emotion.

By the 'seventies, the leaven of honest German

scholarship was already at work in America, brought back by enthusiastic, forward-looking young men. Indeed, at the opening of Cornell University in 1868, along with the total abolition of the marking-system, at least in its daily numerical expression, went the substitution, as far as possible, of lectures for recitations in all branches outside of mathematics and languages. This represented a great advance, but its real effectiveness depended on the skill of the lecturer in building his work on a foundation of knowledge already approached, and on the amount of enthusiasm he inspired in his hearers. As a pioneer at Cornell, I recall with gratitude the historical discourses of President White and of Goldwin Smith, admirable in all respects. Those of Charles F. Hartt in Geology and of Burt G. Wilder in Biology, were likewise interesting and memorable. But in Physics I learned next to nothing. The first professor was drearily tedious, connecting his formulae with nothing I already knew. The second was even worse, as his lectures were limited to the most commonplace ideas, and were interlarded with cheap jokes and cheaper sentiment.

As for the course in English Literature, I remember too well my first hour in that subject, because I took down the opening sentences word

for word—all the more carefully as I had entered the class a little late. “James Thomson,” it appeared, “was born at Ednam near Kelso on the River Tweed, in Roxburgh County, Scotland.” The whole talk, in fact, consisted solely of information readily accessible in textbook or compendium, in which, as a beginning student, I had not the slightest interest. Hiram Corson, however, used to read to us poems and prose by authors worth knowing, and in such a way that we understood what they meant. George William Curtis, too, with charming voice and in exquisite English, laid out a background for the understanding of the literary men and women of England during those mid-Victorian days in which so much of the best intellectual work of their country was accomplished.

With the lecture system at its best, little fault is to be found. Recently, however, its universal employment in our higher institutions of learning has come in for serious criticism, and legitimately. For one thing, in America no sharp distinction has yet been made between university and college, and higher institutions in general begin their so-called university work two years lower down than in Germany. As the majority of students usually belong to the “lower division”

whatever called, this fact has tended to confuse university methods with those belonging to secondary schools, and at the same time to lower standards in the higher forms of work. One phase of this, as already indicated, is the use of lectures as a means of doling out information rather than of helping the student to gather his own facts and giving him inspiration in the progress of his studies.

Again, since the World War, the American university has, in the growth of its own popularity, developed a new handicap. It is being deluged with mediocrity. From one of the great burdens of education in Europe, the stratification of social classes, America is practically free, and its rage for individual initiative is consequently greater. Here lack of money or of social position need debar no one from a higher education. The number of young men and women who work their way through college, in whole or in part, is accordingly large and rapidly increasing, for to advance by one's own efforts is an American ideal. Our universities and colleges, particularly in the West, are now sought as never before, all of those which deserve approval (and others as well) being crowded with students, so that the problem of how to care for them has become acute.

The state universities are, in general, unable—

even when willing—to stem the tide of numbers by taking the only practicable way out of the dilemma, that is, by raising the requirements for admission, either as to quantity or quality. Thus, for example, the first two years (Freshman and Sophomore) may be relegated to separate “junior colleges” (of which more presently) or to denominational colleges, both of which types are often able to do better foundation work than is possible in a great institution with thousands of freshmen who cannot be given personal attention even in the matter of weeding out; relieved of elementary work, the university of the future will then no longer have to concern itself with required attendance, cuts, honor points, and the other left-over school-boy regulations and distinctions. Or, conditions of admission may be qualitative, depending on high rating in intelligence tests and on information as to character and ability obtainable from outside sources. Or, the two methods may be merged by using technical requirements, accompanied by what Dr. Eliot has called dipping down into the lower schools to secure youths of promise and to encourage exceptional ability. On the whole, however, while the presence of Freshmen in our universities has, of course, its social and other values, these values are obtained at the expense of the higher training which justifies the

abundant libraries and the ample laboratories that relatively few institutions can secure and which they should fully utilize. Close sympathy with great teachers, also, becomes possible only when pupil and professor are students together; and much of the best in the university course rests on friendships with men who have succeeded along lines in which the youth, too, hopes to succeed.

The term junior college was selected about 1910 in the University of Chicago to designate the lower classes as distinguished from the Juniors and Seniors who then were made to constitute the University College, in which a very much larger amount of general freedom is properly demanded and accorded. But retaining the two dissimilar groups on the same campus, and under the same discipline, lays a burden on both. Elsewhere the innovation has resulted in units quite independent of the universities, as to both control and location. Many high schools, for instance, are adding junior colleges to their original function of preparing for entrance to the Freshman class of the university, and thus are holding a fair proportion of their students for a six-year period. To many families where the financial margin is limited, this adjustment is a boon; that it may not be ideal in every particular nor necessarily permanent is, of course, evident. Nevertheless, the fact

that in most of such institutions the instruction will be largely in the hands of university graduates and competent teachers from the high schools will give dignity to the work; and the spirit of emulation will strengthen and diffuse it. Already (1928), thirty-three public junior colleges are now in successful operation in California, besides nine others in private hands. In the rest of the country nearly four hundred are maintained; and not more than eleven of the forty-eight states are now without them. The junior college has come to stay, and must be reckoned a permanent part of our system.

Another scheme for relieving the pressure of numbers in the large universities has just recently been suggested by Dr. Monroe E. Deutsch, Dean of the University of California. This plan involves a number of lower-division colleges, each with its own staff and its own methods of discipline, but all grouped about the advanced center, in the same neighborhood. Such an arrangement would have the advantage of enabling the university with its great resources to develop the higher work in its own way, while each junior college would gain much from close association with it without acquiring a freedom for which it is not ready and without remaining an encumbrance on true university work. Objections to the

system would be its initial cost, and the fact that once in operation it must be continued whether or not finally found preferable to a series of separated and localized junior colleges. It is possible, however, that both classes of institutions, as well as the various denominational schools in the larger states, can maintain themselves not alone in competition but in co-operation, in which feature lies the future of higher education.

A very special and interesting modification of the American system is now (October 1927) being inaugurated at the University of Wisconsin under the brilliant direction of Dr. Alexander E. Meiklejohn and a group of sympathetic colleagues. This plan, frankly experimental, harks back in part to English college organization such as prevails at Oxford and Cambridge. It is, for the time being, necessarily limited to a relatively small number of selected youths who are to live and work together and with their professors under one roof, day in and day out, during the academic year. Not only that. The whole group is to read and study in intimate fashion along one definite but generously comprehensive line. The first subject chosen happens to be Greece, its history, language, and culture. If this community of learning succeeds, more such colleges (for women as well as men) may be developed at Wisconsin,

with a wide range of instruction and research in various branches of knowledge. Such a departure in advanced education holds the possibility of great future usefulness in other institutions, breaking, as it will, into cut-and-dried, likewise into helter-skelter, schemes of mental discipline.

An equally noteworthy advance in collegiate methods has been made by Dr. Hamilton Holt as President of Rollins College, a small but long established institution at Winter Park, Florida. This is an important effort to escape from the incubus of standardized units measured by numerical estimates and from the incubus of mechanical lectures to be memorized and repeated in broken fragments in final examinations. This incubus has been well characterized by Professor H. C. Morrison in his *Practice Teaching in the Elementary Schools*. Under the system commonly followed, says Professor Morrison:

“Occasionally a student may know, but the examination shows no evidence that he knows. . . . Success in recalling content is taken as evidence of learning. . . . The element of mastery is not present simply because there has been nothing to master.”

The Rollins College plan consists of two-hour periods in a seminar or workshop in which students and instructor are brought into the closest

possible relation. This for the forenoon, afternoon and evening being devoted to laboratory work, field trips, and library reading, as well as to music, dramatics, athletics, and the like. Essential to the Rollins system is a generous increase in the number of teachers and the selection of men and women who really know how to teach. The size of sections or classes should not exceed twenty-five, while libraries and laboratories must be adequately equipped: "Not revolution but evolution is being sought at Rollins, and it is believed that in the field of the small private institution this conference plan of teaching will produce better results than the lecture system now so generally in vogue."

Reforms in education, however, are more easily planned than carried out. According to Mr. Philip Bliss Rice, of Indiana University, now a Rhodes Scholar, the growing evil in the average American university at present is "gigantism." This is a malady which notably afflicts our cities everywhere—more expansion, more population, more factories, bigger hotels, and greater commerce. "The tendency on every hand is to subordinate quality to bigness; bigger, bigger, bigger—gigantism is the reality of advance." In the academic world as well progress too often means simply bigness, not better teachers, better think-

ing, and greater freedom of thought and expression. To quote again from Mr. Rice: "When the enrollment increases rapidly, it is necessary to hire a number of cheap men, instead of fewer high-priced men." And the larger the student body the more urgent the demand for instruction in commercial methods, in salesmanship, advertising, millinery, and outside matters, useful no doubt, but too often parasitic on institutions devoted to high thinking and instruction through research.

One of the incidental evils of overcrowding has been the tendency, previously noted, to use lecture courses for purposes which can be accomplished only by more personal means. The lecture system, also, as already indicated, even when legitimately employed, demands skill and experience as well as personality. It has suffered from the appointment of incompetent or untried teachers. In dealing with swarms of improperly prepared or uninterested students, the lecture becomes a matter of routine, yielding neither broad views nor personal enthusiasm. Unless handled by a master, such courses tend to deprive the student of incentive to serious study, and to leave him at last scarcely more scholarly than when he began. Examinations in such courses are likely to

degenerate into mere numerical tests of the accuracy with which the lecturers' facts or opinions have been retained.

The routine lecture, as Professor W. F. Whitney of Vassar has stated, "naturally tends to make the student a mere passive recipient of information and opinion, the slave of his notes or of the convenient digest; it affords no stimulus for any but the best to make use of the bibliographies of sources and lists of parallel reading." A better system, as students at Dartmouth have recently urged, would "make the acquisition of the necessary information the concern of the student rather than that of the instructor."

In his monumental essay on "What Knowledge Is of Most Worth?" Herbert Spencer proclaimed that knowledge of one's self counts most in value to the educated man. To him, in general, Physiology, Psychology, and Biology deserved cultivation, rather than the conventional *Tripes* of his day, Greek, Latin, and Mathematics. One may or may not accept Spencer's dictum, but any knowledge to be valuable must be accurate and serviceable, either practically or spiritually, in the conduct of life. Certainly the old-time recitation system failed to make it so. Under this régime, the purpose of which was designated as "culture," men used to admit, or more often to

boast, that nothing learned in college had helped them later on. One graduate is reported as remembering Greek only as "the stuff with little crooked letters." Nor can the "knowledge which is most worth" be secured through lecture courses alone; for these at most touch only the edges of a subject. Verities are not to be realized at second-hand. Moreover, the average student is but half interested, as the facts given out are not his own unless he has helped to secure them. The partial knowledge he retains is like clipped coin, ranging always below par.

In science, the lecture system alone is an anachronism. Crudities in examination papers in scientific courses have often been held up to ridicule. They are the natural results of science instruction taken wrong end first. The laboratory should not be employed to verify the lecture, nor even the textbook, but rather to yield revelations which the lecturer can connect with the students' own inductions. Through misuse of the lecture we have the spread of what Dr. Wheeler of Harvard calls "the dry rot of academic biology." Stupidities largely disappear when the student has laid hold on reality. One who has intelligently and willingly identified and described a few lizards and snakes will not write: "Reptiles have two or more pairs of limbs, such as the locust and

others." Nor will his fellow-worker with the microscope describe bacteria as a substance "used in spraying fruit trees." Nevertheless, we must admit that anything is possible in the case of the reluctant student making up his year of science required for culture purposes.

College students, in general, are often divided into two classes, the eager and the indifferent, those who earnestly desire an education and those who do not—the latter group being greatly enlarged with the strain for bigness which few colleges altogether escape. But those who really care are the only ones who should have place in a school for higher instruction. Plenty of room lies outside for the others, and outside they should be kept. No genuine scholar should have to devote any part of his time to drilling people who do not want to be educated. Such persons commonly regard both teachers and subjects as nuisances, necessary because the delights of academic club life cannot at present be obtained except in connection with such agencies. To change our subjects or our methods would not alter this fundamental fact. It has been asserted that "a college lecture is a function in which the personal peculiarities of the lecturer can be seen to the best advantage and at the most perfect leisure." From this point of view the whole cur-

riculum is of minor interest, a matter "purely academic."

It happens occasionally that a teacher bored by the "incredible dullness" of statistics and denatured facts adopts a more sprightly tone, bubbling and babbling on with the incoherent cheerfulness of a modern columnist. Between incredibly dry and intolerably vapid instruction, there is apparently little choice, for to the student neither is worth while. But the former has one advantage—it may be thoroughly sincere in thought even though halting in expression.

A natural remedy for misuse of the lecture system is twofold: better instruction and limited classes. In Princeton University, President Wilson met the problem by a series of special preceptors who fortified the lectures of the professor by discussions carried on in small groups of students. This follow-up work gave accuracy and clearness to ideas too often only vaguely apprehended beforehand. But inquiry on my part among a few preceptors and students brought out the admission that, in some cases at least, the work would be just as effective if the lectures themselves were omitted. Mere information-giving does not carry far, nor does it strengthen the will or increase the skill to secure and weigh evidence.

To consider, finally, a third incubus on academic operations, by Routine I mean the use of methods involving the suppression of individuality among students. The "contagion of personality" is the most important agency in creating scholars. Darwin "walked with Henslow," our leaders in Zoölogy in their day walked with Agassiz, and later with Baird—and their students in turn walked with them. Routine is the expression of human inertia and lack of initiative. It is not alone a matter of school management, being even stronger in the student body than in the faculty. "The way we do things at our university" has thus kept medievalism alive in more than one institution. Every innovation has to fight or win its way in the academic as well as in the political world. The persistence of war, the chief menace to civilization, is ascribed by Professor Jacques Novicow primarily to the influence of "Saint Routine." To break through routine is a primal task of any benefactor of the human race. Largely because of routine, rather than from any particular religious or patriotic zeal, men who fail to keep step with the drum "because they hear a different drummer" have been suppressed or destroyed throughout the centuries. The insurgents of one age become naturally the saints of the next; every religious creed, no matter how re-

actionary it may appear today, was written by heretics of their day and generation. The world needs constantly the help of men of large caliber and executive force, who, in these days of following the band wagon, hear a different drummer. In education, as in life, there is no substitute for intelligence, and no high intelligence without freedom.

Dr. Ray Lyman Wilbur of Stanford has lately (*President's Report, 1925*) expressed one phase of the problem as follows:

"Maintaining standards were the words that symbolized academic arrival, a few short years ago. Now the very word standard brings with it a sense of reproach because in the efforts to force certain standards upon education, the life juices of intellectuality and initiative were being squeezed out and the divine right of the human to be different and yet achieve success was in danger of being denied in the very places where advance comes best with a measure of freedom. The great difficulty is to define these standards so as not to consider standards, quality, and progress as synonymous terms. The full advantage can come only if the members of the teaching profession of the country agree to do less work for their students."

Coming now to certain minor tormentors of the American university, men who would use its

prestige and momentum for their own purposes, I would name them the Pharisee, the Philistine, and the Charlatan.

The Pharisee, interested in the promotion of some special ecclesiastical or military organization, would like to color instruction with his own hue. In freedom of thought, then, he finds the fountain of heresy, notwithstanding the fact that some sort of heresy lurks in every line of honest investigation. The university must not shrink from such charges, for its prime duty is to question everything. How else "hold fast that which is good"? Its true function is to be umpire, not advocate—not to provide students with "sound opinions" on any question of religion or politics, but to put them in position to form opinions. Ready-made opinion is merely prejudice. To be of value in the conduct of life, convictions must have a deeper root.

The university exists for the purpose of inspiring the student to train himself, to use his mind with enthusiasm, to reach conviction through contact with nature, men, and books. First in importance, however, stands the incitement of personality, "the contagion of ideas," as it has been called, the impact of character.

A great teacher the Pharisee can neither understand nor support. But, however annoying his

efforts, he is a serious obstruction only locally and for the time being. In the larger movements of life he is left behind and forgotten. And in spite of insistence on tradition, sacerdotalism, symbolism, or creed, by which "pure religion" through the ages has not been left "undefiled," the irreducible residue of every religious organization has made for right living.

The Philistine, in one way or another, would make the college useful to his business. He cares little for theory and less for abstract truth, but is interested in "results." If the university is a "huge factory for turning out a standardized intellectual product," he would like to see that product of a type helpful in his own affairs. The college should look after this matter, he holds, if he is going to help pay for it, as he knows from experience he will be called on to do. Of liberalism he approves in case it be not too liberal, a fine asset so long as it forwards his interests.

No higher institution worthy of the name, however, can or will accept final responsibility for student opinion on any subject. To lead students to think for themselves, I once more repeat, is its first duty, a duty by no means easy and one which conventional teachers try in vain to accomplish through regulations, examinations, and honors. Again, the contact of mind with mind,

of matured personality with personality in the making, is the chief effective agency of the university. Its successes, not measured by numbers in attendance, football victories, or availability for business purposes, are beyond the Philistine conception.

But rich men, even rich trustees, are by no means necessarily Philistines. In the American college or university, financial control rests in the hands of a board of trustees, control of education in the faculty of instruction, with a president as spokesman and leading member. This system works perfectly in theory and well in practice when the distinction is properly observed. The board of trustees, having chiefly business functions, is naturally made up of men successful in finance. Business looks toward immediate measurable ends and not toward idealism or research. Hence arises a tendency of some boards to encroach on academic functions, usually, though not always, to their disadvantage. But the great majority of college trustees, the country over, try sincerely to further the best interests of their institutions, although during the period of political hysteria from which we are now convalescing, temptation to meddle was unduly great.

The Charlatan, defined as a person who pretends to knowledge or power he does not possess,

is the busiest member in my threefold classification. His special quest is notoriety. He flutters like a moth around the torch of truth. Dropping that figure, we may picture him as darting out from academic shelter to assail some luckless or vulnerable Philistine; or, perhaps, appearing from beyond the pale to point his accusing finger at the radicalism or the conservatism of organized institutions. The one is as easy as the other. He appeals to the press: "Your colleges all teach Bolshevism; it must be stopped." Or from another corner he shrieks: "The universities pander to the rich. You give to them your highest scholastic honors, hoping to get endowments in return. A professor dare not teach what he believes!" The air is full of just such shoutings. Meanwhile, with few exceptions, the teachers of the subjects in question go on with their task of laying out the evidence and training students to weigh it, not suppressing their own opinions nor forcing them on others. They are not misled by sidelights, either white or red.

But rational moderation attracts no public attention. The Charlatan, therefore, may be counted as an extremist of one sort or another. Yet it is no evidence of solidity of judgment that one should cling to assumed fundamentals in religion or politics or even in science; still less is it

the sign of an independent mind to proclaim unfettered views on any subject whatever.

The whole history of education has been beset by meddling of old tradition and new thought, the two based alike on deduction or guess work as contrasted with slow results of inductive methods of science. It has always been easier to fall back on the solid ways of the fathers rather than to strike out into new fields. It is always swifter to reach out into the air rather than to wait for returns which demand patient observation or experiment for securing reluctant truth. Hence fundamentalism and fantasy are concurrent, the first a persistent drag on science, the other its "lunatic fringe."

Here, however, it must be admitted that even within university groups certain hindrances arise. Some assert that the greatest obstacle to progress is found in the body of Associated Alumni. This is true to some extent, but not universally. There is a type of graduate which holds to the country club ideal, and still another which would preserve the beloved Alma Mater as it was in his student days. Neither is concerned with new views, new subjects, or new relations to the world. In the great cities Philistinism may dominate the alumni, while Phariseeism is most evident outside the currents of commerce. But it is the continuing func-

tion of the university to reduce the numbers in each of these classes—in other words, to justify itself even to those reared under its own outworn methods.¹ It is often stated that the alumni in general are opposed to educational advance, but I doubt if in any university this is actually the case. Reactionaries always make the most noise.

The office of university president is frequently regarded as an anomalous factor in academic development, the position being, some assert, of the nature of monarch in a republic. It is also claimed that in so far as the president monopolizes power on the one hand and public attention on the other, the scholars who really compose the institution receive less than their due of consideration. In this contention lies a certain degree of truth, especially if a president regards his office as a personal tribute or perquisite, instead of as an opportunity to serve.

In an address given some thirty years ago, I called the American university head, an autocrat

¹ An incongruous intrusion in higher education, of relatively recent date, is now vigorously pushed by its advocates, the opposition to it growing as its purposes develop. I refer to compulsory military training which no more belongs in a true university than compulsory sectarian teaching, which we all agree has no legitimate place in our system. As a matter of fact, the idea involved in the word compulsory is everywhere disappearing from higher education.

with powers limited only by his own weaknesses or the institution's lack of money, an incongruous element in democratic education, whereas in Germany, then an empire, the rector or titular head is chosen by his fellows and has very slight personal authority, that little being delegated by his peers. In some way, Dr. Rudolf Virchow, the great physiologist of Berlin, heard of my talk and said to Dr. H. Rushton Fairclough of Stanford, then at work in Berlin: "I think that Dr. Jordan is mistaken. Nowhere else is there such arbitrary authority as exists in the Prussian universities. It is not lodged in the Rector, however, but in the Minister of Public Instruction."

Now it may be that the office of university president in America represents a more or less temporary stage in the development of a republic of science and letters, though, at present, such an official seems to me indispensable to achievement. Forward movement, even more than actual accomplishment, is the immediate need, and in every going concern some one person must furnish the initiative. To call our schools universities does not make them so; they are such only in part, and the larger their student body, the more likely they are to fall short of their ideals. To build up universities in the proper sense, the entrance requirements, as already indicated,

should be higher by about two years, and should rest on trained intelligence rather than on verbal memory.

As matters stand, university professors, even the best of them, are criticized from two different angles. One who is completely the teacher will be said to lack university ideals and ambitions; if he devote himself to research, it may be charged that he neglects his students. But half the university staff is by the very nature of things shut out from *Lehrfreiheit*, since half the students are too immature for *Lernfreiheit*. To leave the general direction of university policies to a college faculty is to curtail university ideals; to entrust college matters to a university faculty may mean neglect of detail in the training of boys for manhood.

All our universities are still in the process of creation. "An institution is the elongated shadow of a man"; the president must furnish the initiative, set the pace, give color to the growing organization. He must consider relative values—what expenditures of money will count most in the long run—as well as ways and means by which the necessary money can be obtained. He must thus be the servant, not the master, of the scholars whose activities he assists or directs.

So long as no single institution of higher learn-

ing in America has its permanent form, so long as its administration is a forward urge rather than a function, every college or university must recognize some personal leader. On the whole, the operations of university presidents have been marked by wise patience and well-considered action. We cannot do without them yet.

It must be confessed, of course, that a weak feature in our present system lies in the fact that, competent executives being rare, boards of trustees seldom know how to find them. Nevertheless, as all our institutions are still feeling their way, their educational development requires a co-ordinated policy centered in some one person. Trusting even academic management to a committee of professors has never worked well, because committees deal with the present and must compromise as regards the future.

A competent president has several main functions. Educationally, he should look at least ten years ahead; he should be himself a scholar, because he must know and weigh scholarship in order to make wise choice of professors; he must keep in sympathy with his colleagues, and in close touch with their students. "Colleges," remarked Emerson, "can only highly serve us when they aim not to drill, but to create; when they gather from far every ray of various genius to

their hospitable halls, and, by the concentrated fires, set the hearts of their youth on flame." It was said in his day of Dr. Nott of Union that "he took the sweepings of other colleges and sent them back to society pure gold."

Men who meet such conditions are few, as already observed. Trustees, also, are likely to prefer one who can raise money, who can make acceptable speeches, who is clubable, who will stand hitched, whose name is often in the press—matters quite alien to real academic necessities. For a college executive need not be a financier, though he must know the value of money and how to expend it wisely. He should not give his time to petty details; deans and secretaries will attend to that and more cheaply. He must not be a booster, or a go-getter, or a drive-wizard, nor possess in any high degree the traits of the glad-hander, however useful these qualities in ordinary social conditions. With friendliness toward people at large, he should be a central source of that high austerity embodied in actual scholarship.

Though the trend of university education, on the whole, is toward sane and moral life, and though it can have no higher final end, it cannot pursue its result through any systematized machinery. "The rod behind the mirror," once the

reliance of German households, has no place in the university. No system of rewards and punishments ever made men good or wise, and none is more futile than that of honors balanced against demerit marks. Enforced attendance at prayers or chapel or, for that matter, at anything else, fails to arouse the spiritual nature, and didactic teaching or paternal scolding are alike ineffective.

As love casts out fear, so enthusiasm casts out vulgarity—vice's initial step. The university man should rise above the cheap temptations which beset youth on every side, now tenfold more numerous than before war raised the lid under which society formerly tried to confine vulgarity and folly. "War-time is the opportunity for fools," as Lord Courteney used to say. War's aftermath is their season for self-exploitation.

But the university man should resist all this. The foes he must engage are more subtle than those which center in jazz and bootlegging—as varied also as his own relations to society. The university should help him to meet them valiantly. This it can do through the contagion of personality, the inspiration of intellect, the arousing of enthusiasm for intensive work, a spirit of devotion and helpfulness toward others. As for the first, to turn our youth toward righteousness we must show them how righteousness looks when

it is lived. As to the second, a great teacher always leaves a great mark on every student with whom he comes into real contact. As to the third, great investigators breed investigators; that such intellectual heredity exists among scholars is recognized by every serious worker.

In my address of 1910 on "The Making of a Darwin," I asserted that three things were necessary to that end: the right kind of germ-plasm to begin with, the hereditary stuff which determines high possibilities; next, contact with nature at first hand; and, lastly, the presence of a sympathetic guide. In Darwin's case the material was of the best the centuries offer; in due time, also, the young naturalist wandered among the hills and fens of Cambridgeshire, collecting beetles and observing everything else; and, finally, as we have recalled, he "walked with Henslow," the spirit of the great botanist kindling his own.

The scholar's life should have a moral purpose. His training is not merely a possession, but a privilege carrying with it a duty to humanity. Give him a message to speak to other men, and when he leaves your side you need fear for him not the world nor the flesh nor the devil.

Any university can exert a tremendous impulse for moral life, though only through the unflinching devotion of its members. This influ-

ence must be exerted spontaneously, even unconsciously, by men alien to all forms of vulgarity and vice, and thoroughly imbued with the best in mind and morals.

Let me quote, in closing, from an address by William James at Stanford in 1906 on "The University's Spiritual Superstructure":

"The first unit of this superstructure must be a faculty of great men, at whatever cost, from every part of the world. If you have the geniuses, you can dispense with the organization. Spiritual life passes from man to man by contacts. Offer the opportunities, leave the student to his natural reaction. Geniuses are ferments. When they come together the effects are incalculable but pervasive and momentous."

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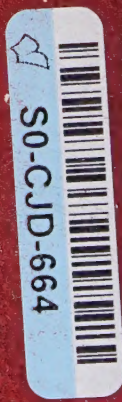
The trend of the American university



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